

IVS - Intellio INITIO cameras

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1. Introduction, important information

This guide summarizes the registration, management, and configuration of Intellio Initio cameras within IVS. For a complete overview of the system architecture and configuration, please refer to the *IVS Installation Manual* documentation.

During the installation of any Intellio Initio camera—whether it's a general-purpose camera with a fixed or varifocal lens, a thermal camera, or a PTZ camera—the following steps must be completed:

- Set a password for the admin user to **activate the camera** using the [Intellio Device Explorer](#) software or by accessing the camera's [web interface](#),
- Configure the camera's **IP address** (using Intellio Device Explorer or the web interface),
- [Search for](#) or [manually](#) add the camera, then [register](#) it in IVS,
- Set up [motion detection](#) so that recording only occurs when there is movement in the monitored area,
- Enable [Smart Meta](#) processing to allow easy searching in the recordings using detectors created later,
- Define the desired [camera-side](#) or [server-side](#) detectors.

Most parameters of all Intellio Initio camera types ([image quality](#), [encoder](#), [motion detection](#), [bulk parameter settings](#), [audio](#), [I/O ports](#)) can be configured directly from IVS. However, some parameters may only be accessible through the camera's web interface.

It is also recommended to configure the following useful features to create an efficiently usable system:

- [Name](#) the camera,
- Organize cameras into [groups](#),
- Assign [index numbers](#) to the cameras to allow easier system use with keyboard shortcuts,
- If needed, set up [privacy zones](#) in the image,
- Add [navigation arrows](#) to allow operators to easily switch between cameras.

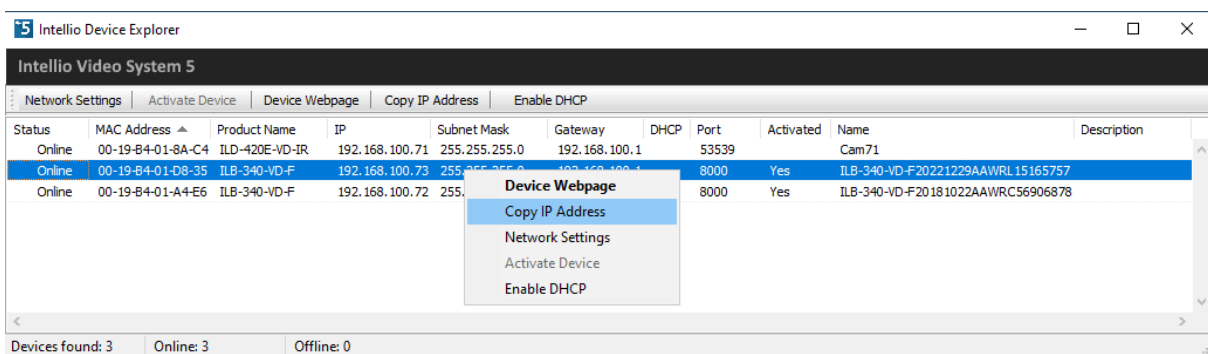
2. Camera activation, scan with Intellio Device Explorer

In the Start menu, under the Intellio Video System group, you can find the **Intellio Device Explorer** program, which allows you to locate, activate, and configure the network parameters of Intellio Initio (ILB) cameras. The program is also available in the following directory: c:\Program Files\Intellio Video System\Intellio Server\Intellio Device Explorer.

Important: *Intellio Initio cameras must be activated before first use. During activation, set the initial password of the admin user.*

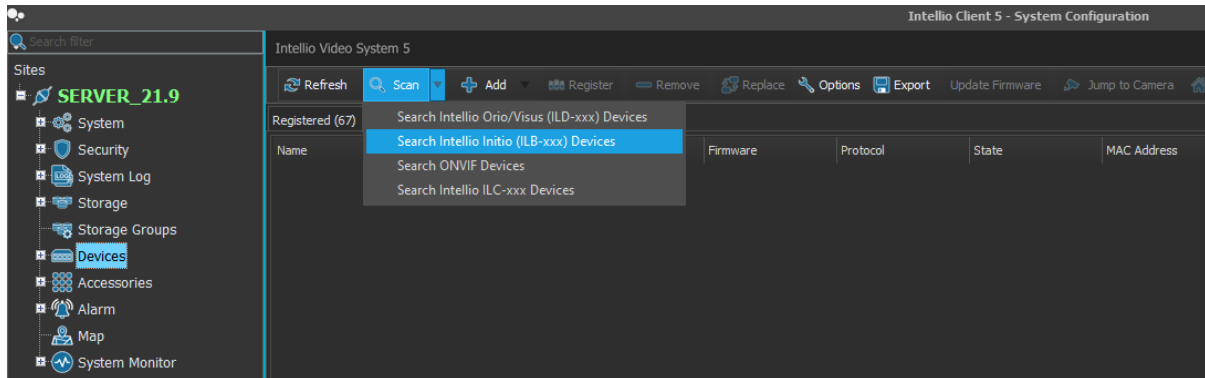
After launching, the program continuously searches the network for cameras, and then displays the found cameras in an automatically updated list. Right-click on the camera you want to set up to display a pop-up menu with the functions available for that camera type. Or left click on the camera you want to use and select the functions that will become active in the program header:

- Click **Activate Device** to activate the device. In the window that appears, you need to enter the initial password of the admin user. If the camera is already activated, this button will remain grey.
- By clicking **Network Settings**, you can change the network settings of your device by entering the admin password.
- When you click **Device Webpage**, the web interface of the device appears in Internet Explorer.
- **Copy IP Address** copies the IP address of the device to the clipboard. Paste this into your browser to open the camera's web interface or you can use it when manually adding the camera in IVS.
- **Enable DHCP:** by entering the admin password, you can quickly enable automatic IP address assignment if there is a DHCP server on the network, but we recommend using a fixed IP address.

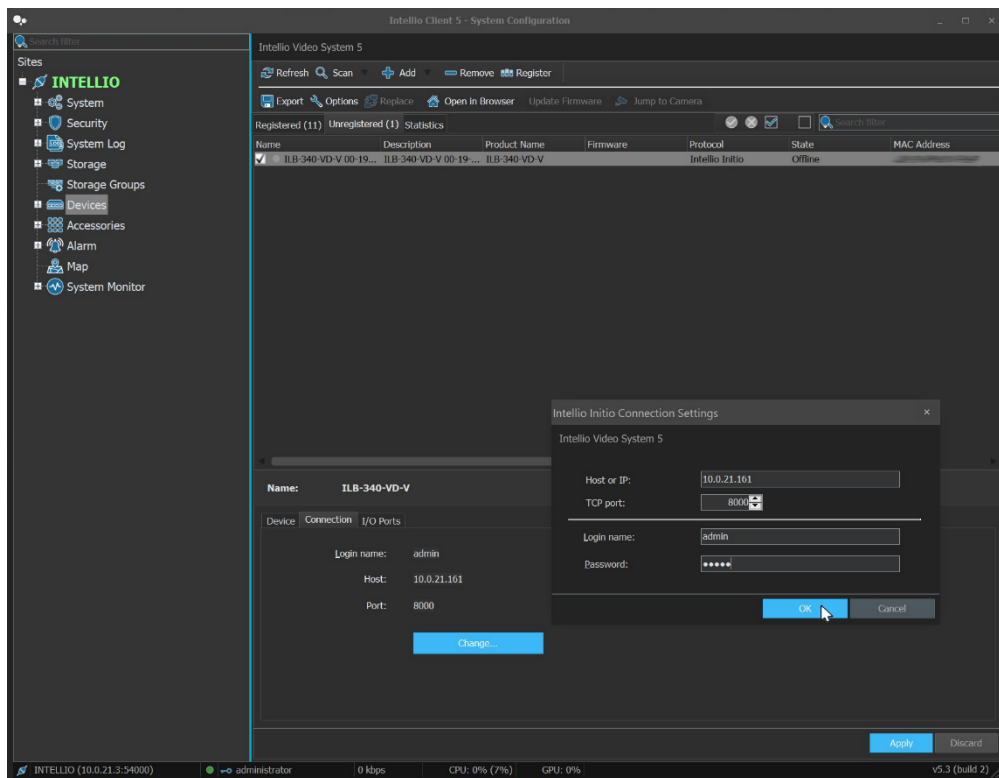


3.IVS Search feature

IVS can search for Intellio Initio (ILB) cameras on subnets accessible by the server. The search can be initiated by selecting **System Configuration / Devices / Scan / Search Intellio Initio (ILB-xxx) Devices** function:



Discovered new cameras can be found in the **Unregistered** panel:



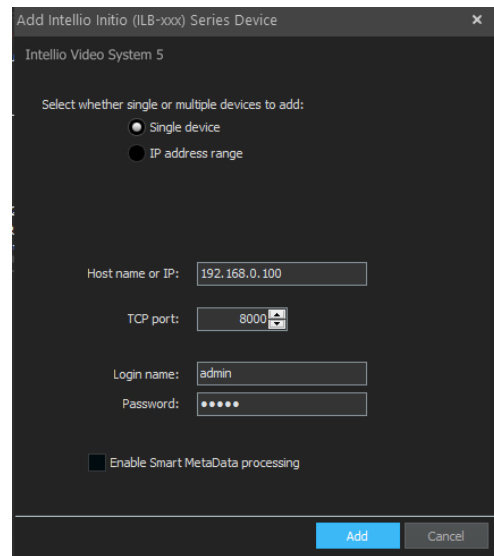
To register the cameras found during the search, authentication is required. Select the desired camera from the list and open the **Connection** tab. This section displays the default username, the camera’s IP address, and its port. By pasting the IP address into a browser, you can access the camera’s web interface to identify it. Then, click the **Change** button and enter the username and password assigned to the camera. Click the **Refresh** button, then complete the camera registration as described in the [Registering devices](#) section.

Important: Make sure you are using the correct password, as the device, under default settings, will disable login attempts for 15 minutes after 5-7 failed tries! You can disable this restriction on the camera's web interface (Configuration > System > Security > Security Service), but for security reasons, we do not recommend turning it off.

4. Add manually

In case you wish to add an Intellio Initio (ILB) camera to the system with a known IP address:

- On the **System Configuration / Devices** page, click on **Add**, then select **Add Intellio Initio (ILB-xxx) Series...**
- Enter the IP address manually into the **Host name or IP, TCP Port** field and enter the **Login name** and **Password** of the device. The default TCP port is 8000.
- You can enable the processing of **Smart MetaData** functions, if you want to use [SmartSearch](#), [SmartLive](#) functions on the camera.
- Click on **Add**

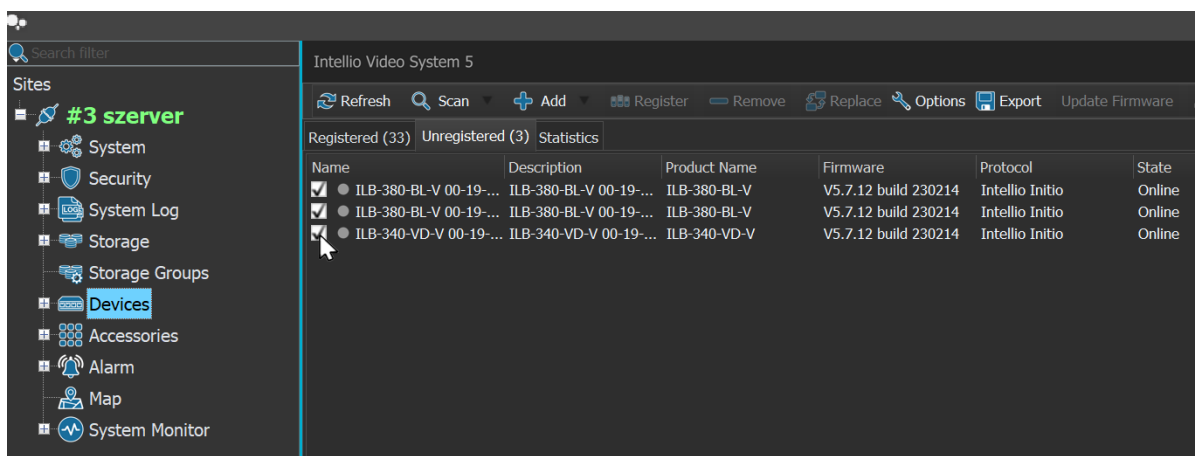


Select the device and click on **Register** button as described in the next section.

5. Register devices

Every device must be registered on a SITE, and the primary server for the device needs to be specified. The primary server is responsible for storing the images and data of the associated cameras and devices, as well as managing the cameras.

Devices that have been added to the system but are not yet registered can be found under the **Unregistered** tab in the **System Configuration / Devices** menu.



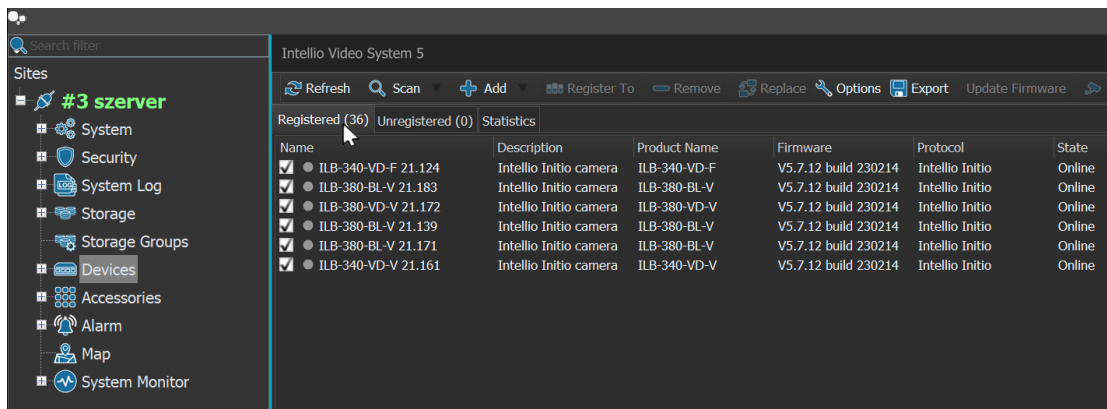
The system maintains partial data flow with the listed and enabled devices, meaning the displayed device information is always kept up to date.

To register a device, select the devices you want to register and press the **Register** button. Before registration, you must enter the username and password required to manage the device. Enter these credentials under the **Connection** tab of the selected device, then press the **Refresh** button. After providing the credentials, confirm the registration.

For multi-server Sites, specify the device's primary server in the pop-up window.

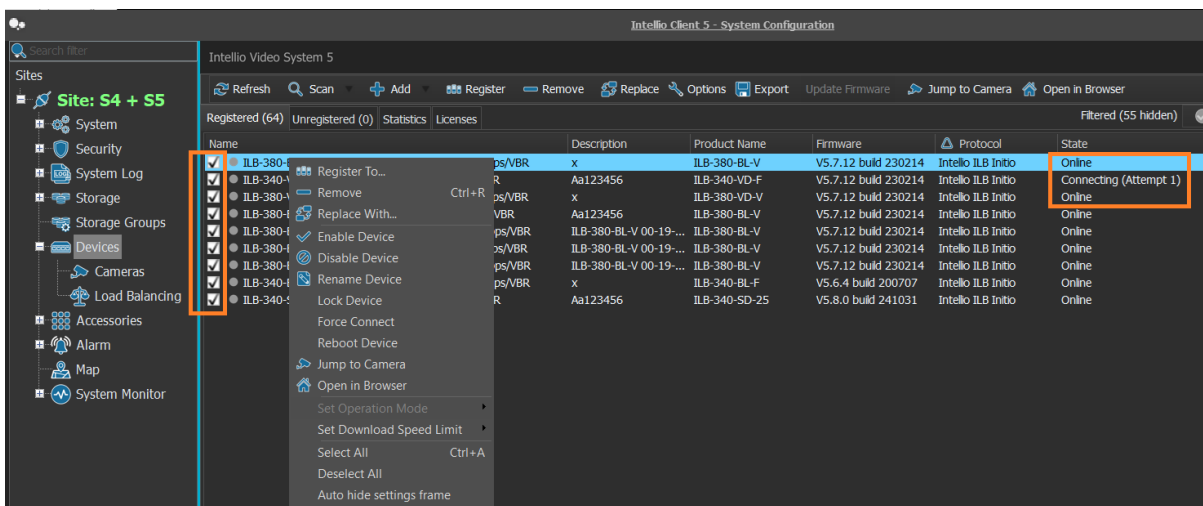
Once registered, the server establishes a connection with the devices, and they start transmitting video.

Registered devices appear under the **Registered** tab.



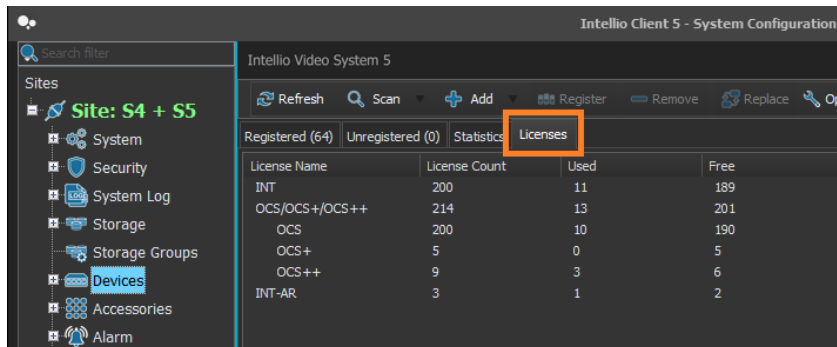
6. Manage devices

The checkmark next to a device name in the **System Configuration / Devices** menu indicates that the device is enabled, and the server is either maintaining or attempting to maintain a connection with it. If the connection is successful, the Status column will display Online. If the connection is unsuccessful, the Status column will show an ongoing connection attempt.



You can click the checkmark with the left mouse button to toggle the device between enabled and disabled states. Alternatively, you can right-click the device and select **Enable Device** or **Disable Device** from the pop-up menu.

If a device is disabled, the server does not maintain a connection with it, live footage cannot be displayed from the device, and no images are stored. However, previously recorded footage from the device can still be played back. In the disabled state, the device does not consume camera licenses, the quantity of which can be checked under the Devices menu / **Licenses** tab.



If the server continuously fails to connect to a device, the number of attempts will gradually decrease over time. If necessary, an immediate attempt can be forced using the **Force Connect** option in the pop-up menu.

The selected device can be replaced with another device registered with the same protocol using the **Replace With...** option in the pop-up menu or the **Replace** button in the top button bar. Before selecting this function, add the device you want to replace the selected device with to the **Unregistered Devices** list.

During device replacement, the device-side detectors are not transferred and will become inaccessible afterward, potentially displaying error messages if activated. This is because the device-side detectors were assigned to the replaced device. Server-side detectors will continue to function without issues after the replacement.

7. Open camera web interface

Initio cameras have their own web-based configuration interface. This interface can be accessed directly from the IVS by pressing the **Open in Browser** button in the **System Configuration / Devices** menu. This button opens the camera's web interface in the default browser with a single click.

The camera's web interface is accessible only if the camera is reachable from the computer running the client program. It must be accessible from the client program running on the server, but it can be accessed from any location only if the appropriate network settings are in place.

8. Intello Initio cameras Firmware update

You can update the FW of Intello Initio cameras via the camera's web interface. The FW packages for the cameras can be found at intello.eu/downloads/.

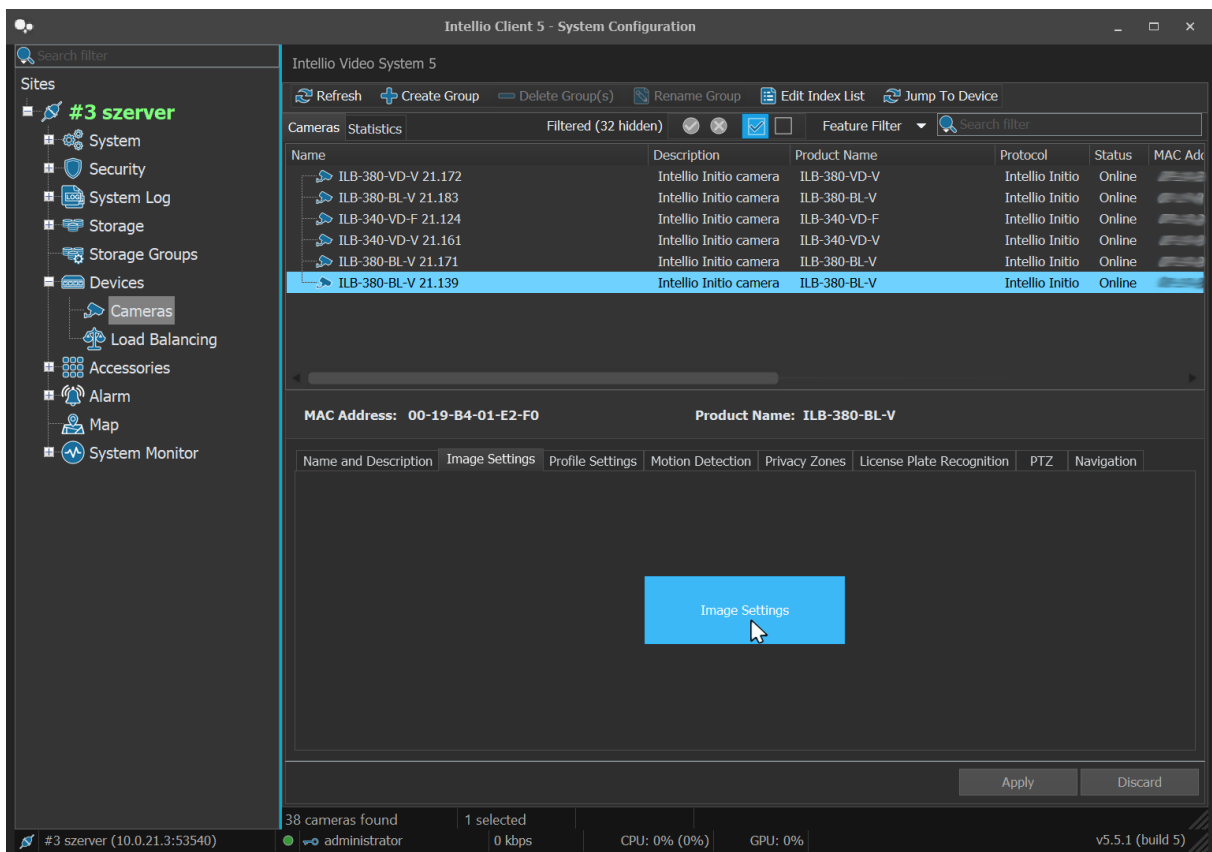
9. Change camera name and description

To edit the name and description of an already registered camera, navigate to the **System Configuration / Devices / Cameras** page. Select the camera, go to the **Name and Description** tab, edit the fields, and then press the **Apply** button in the bottom right corner.

10. Change image settings

To edit the camera's image parameters, go to the **System Configuration / Devices / Cameras** page. When selecting the Initio camera, use the **Image Settings** button on the Image Settings tab to display the settings window. In the settings window, only the most commonly used settings can be adjusted. If you need special settings, access the camera's web interface and modify the necessary parameters there.

You can modify settings on multiple Initio cameras simultaneously by right-clicking on the selected cameras and choosing the **Image Settings** option from the pop-up context menu. A detailed guide for configuring group camera parameters can be found in the [Group Camera Settings](#) section.



10.1. Color

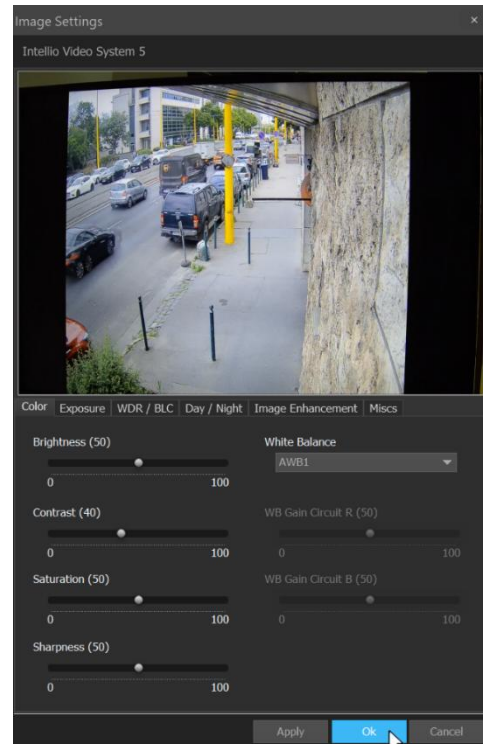
Brightness: Adjusts the overall brightness of the image.

Contrast: Used to increase or decrease the contrast between colors. Higher values result in stronger contrast but may darken the displayed image.

Saturation: Controls the richness of colors.

Sharpness: Adjusts the sharpness of the displayed image.

White Balance: Ensures that the colors in the images are accurate. By default, it is set to automatic. If you wish to adjust it manually, switch to manual mode and use the sliders below to set the desired values.

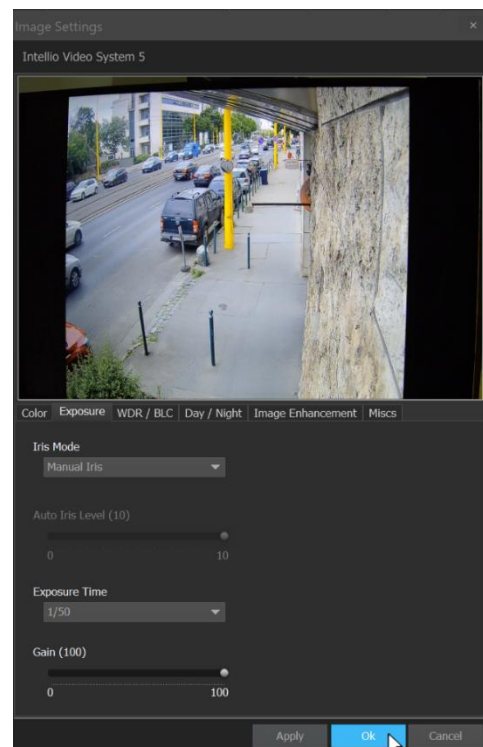


10.2. Exposure

Iris Mode: depending on the camera model, you can choose one of the modes displayed.

Exposure Time: Enter a shutter speed value.

Gain: adjust gain depending on camera model. Note that increasing the gain may make the image noisier.

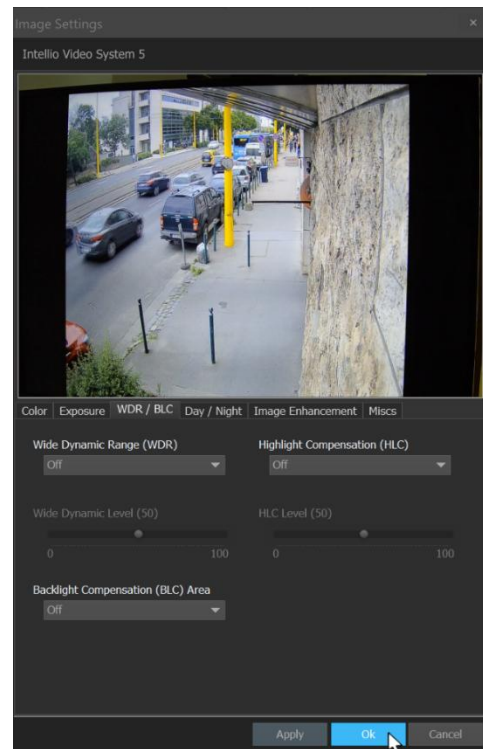


10.3.WDR/BLC

Wide dynamic range (WDR): Compensation for images that contain both too dark and too bright detail can be enabled and adjusted.

Highlight Compensation (HLC): compensation for high brightness details can be enabled and the level can be adjusted.

Backlight Compensation (BLC) Area: The backlight compensation area can be selected from the drop-down menu.

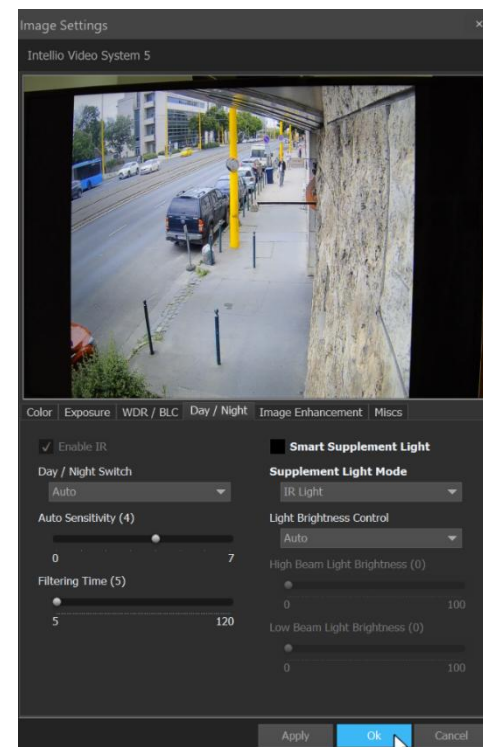


10.4.Day/Night

Day / Night Switching: Use this tab to set the camera's day/night operating mode.

- In **Day** mode, the infrared filter is located in front of the sensor, the camera gives a color image.
- In **Night** mode, the infrared filter is removed from the sensor, increasing the camera's sensitivity to light as the camera can see in the infrared range.
- In **Auto** mode, the camera switches between night and day mode according to lighting conditions. The shift sensitivity and filter time can be adjusted

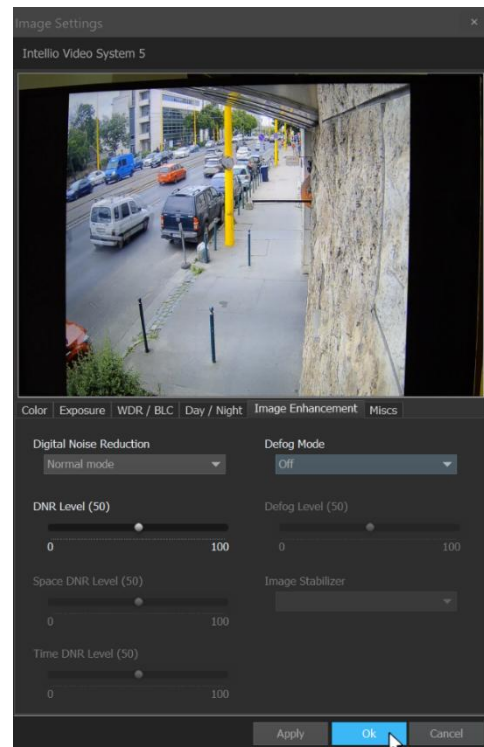
Enable IR / Smart Supplement Lamp: infrared illumination can be enabled and adjusted depending on its operating mode and camera model, its level can be adjusted.



10.5. Image enhancement

Digital Noise Reduction: the noise cancellation mode and mode-dependent parameters can be set (DNR level, Space DNR level, Time DNR level). The higher these values are, the more blurred the displayed image will become, but it will also be less noisy.

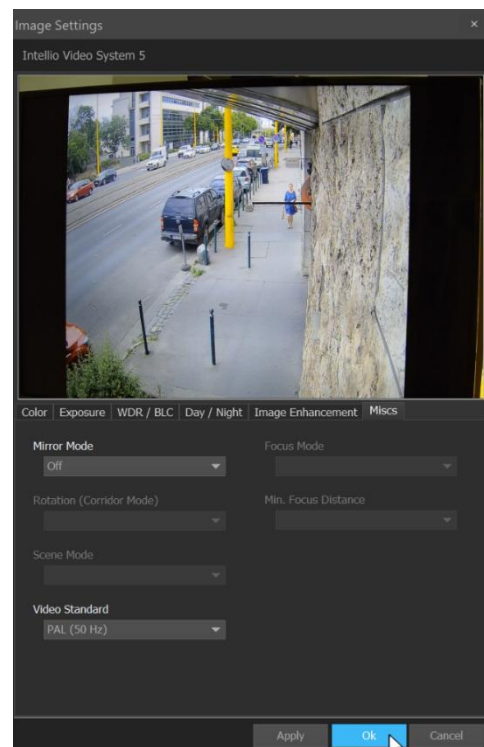
Defog Mode: the camera's anti-fog mode can be selected, and its level can be adjusted (Defog level)



10.6. Miscs

Mirror mode: You can choose the direction of reflection of the image.

Video Standard: the base frequency of image processing can be set.

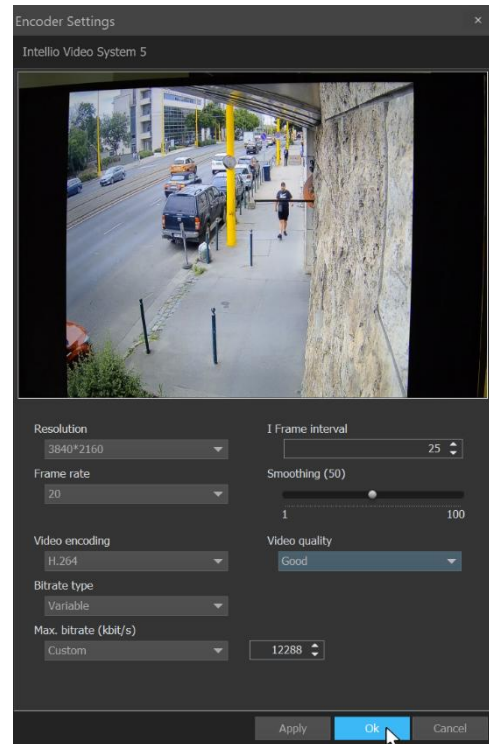


11. Profile settings

With the desired Initio camera selected on the **System Configuration / Devices / Cameras** page, on the **Profile Settings** tab, use the **Main Stream Encoder** or **Sub Stream Encoder** buttons to display the corresponding setup window.

You can change the settings on multiple Initio cameras at the same time by right-clicking on the selected cameras and selecting **Encoder Settings** from the pop-up local menu, then selecting **Main Stream Encoder** or **Sub Stream Encoder** from within the menu.

- **Resolution:** The camera resolution can be selected. A lower resolution means lower image quality, but depending on the camera model, higher fps may be achieved.
- **Frame rate:** Select the number of images taken per second.
- **Video encoding:** the compression method (H.264, H.265, MPEG4) is selectable.
- **Bitrate type:** the bitrate type can be set to constant or variable.
- **Max bitrate (kbit/s):** The maximum data size allowed for the video stream, the camera compresses video data at or below the specified maximum.
- **I-frame interval:** Distance to follow keyframes. Reference images that are significantly larger in size and processing CPU. The Intellio system allows a maximum frame rate of 100, but 25-30 is recommended for optimal performance, preferably in line with the fps.
- **Video quality:** video quality, level of compression can be adjusted.



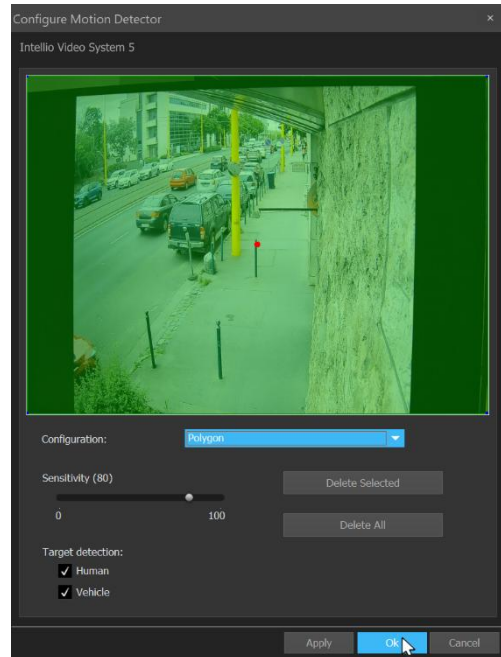
During camera registration, the most optimal configuration is automatically applied. For the **Monitoring** (Live View) and **Recording** profiles, the primary high-resolution video channel is selected, while for the **Monitoring (low resolution)** profile, the secondary low-resolution video channel is used. This way, if the client program displays the camera feed in a small window, it will utilize the low-resolution video stream to better optimize the resources of the computer running the client program.

- The **Monitoring profile** is the high-resolution primary stream that appears in Live View mode when the camera's panel is in SPOT mode.
- The **Monitoring profile (low resolution)** is the low-resolution secondary stream that appears in Live View mode when a Layout with more than four splits is selected, or when performance optimization is enabled in client settings, and the panel is not in SPOT mode.
- The **Recording profile** refers to the stored images, their resolution, image quality, and frame rate. This usually matches the primary high-resolution stream.

12. Set up the motion sensor

By selecting the desired Initio camera on the **System Configuration / Devices / Cameras** page, go to the **Motion Detection** tab and use the **Configure Motion Detector** button to display the configuration window. Based on the specified settings - and the IVS Storage Group settings (see Storage Settings documentation) - the camera images are stored on the IVS storage units.

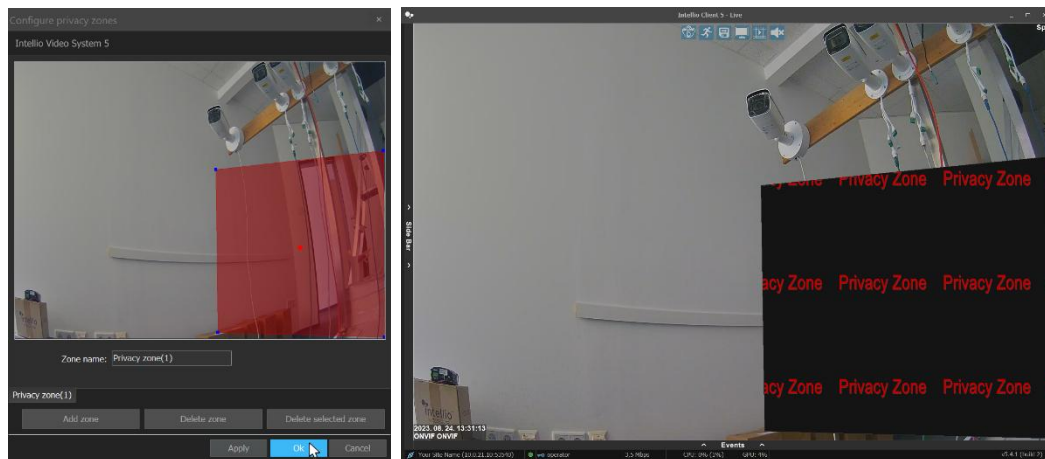
- **Configuration:** Define the areas sensitive to motion detection, depending on the camera model, either through polygonal or grid-based masking.
- **Sensitivity:** The value determines how much variation in light and shade the motion sensor will consider. With a low value, it is easy for a person wearing a coat of a similar color to blend in with a similarly colored wall, without the sensor noticing. With a high value, this won't happen, but the motion detector may trigger on even minor changes in lighting conditions. The higher the value, the smaller the change that will trigger a detection.
- **Target Detection:** Depending on the camera model, the motion detector may trigger for humans and/or vehicles. If no categories are selected, the system will trigger for all categories (human / vehicle / other).



Comment: Create as many masks as necessary. By creating multiple masks, you can set different sensitivity and size settings within the observed area. These can be adjusted in the Expert settings by accessing the camera's web interface.

13. Privacy zones

By using privacy zones, certain areas of the displayed images can be hidden from users, ensuring that only those with the appropriate permissions can view the full images without privacy zones. To create a privacy zone, go to **System Configuration / Devices / Cameras**, select a camera, then go to its **Privacy Zones** tab and click the **Configure Privacy Zones** button. Draw around the area to be hidden and define one or more masks. When logged in with a user with restricted permissions, such as the default **Operator** user, by default, the content behind the masks will not be visible.



14. Camera navigation

Efficient navigation among cameras can be achieved using the camera navigation feature, with clickable arrows displayed on the camera images. Navigation is camera-independent, so it can be used with any camera. To set up navigation, select the specific camera in the **System Configuration / Devices / Cameras** menu, then choose the **Navigation** tab among the camera functions, and press the **Configure Navigation** button.

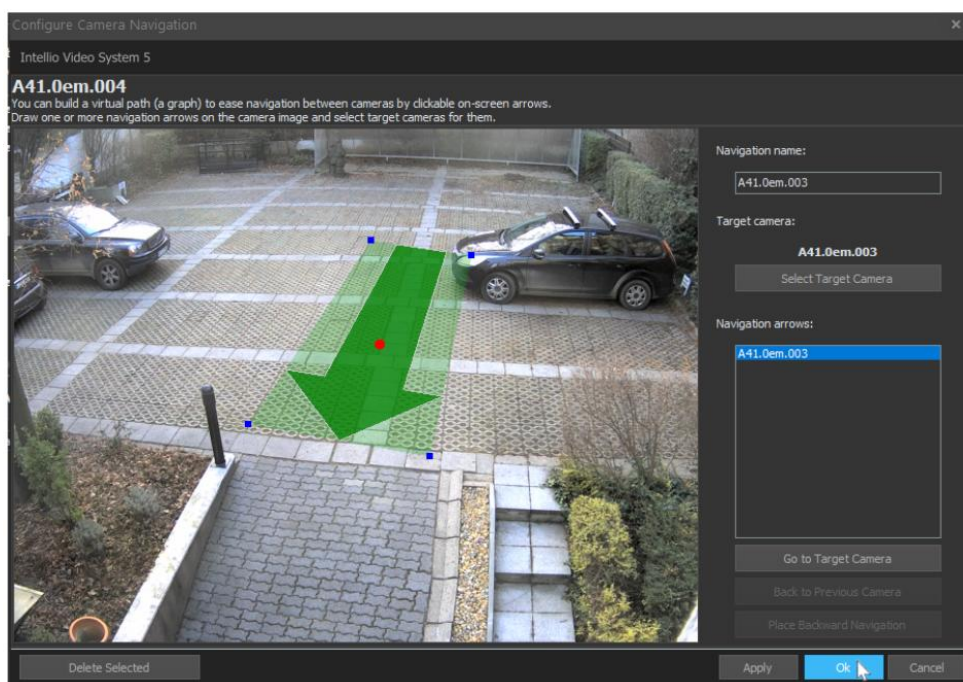
In the **Configure Camera Navigation** window, the live view of the selected camera is displayed, along with any arrows that may have been added. At the top, you can see the name of the currently edited camera, and on the right side, there are control elements used for modifying the settings.

Edit navigation arrows

To select a previously placed arrow, simply left-click on the bounding area or choose the specific arrow from the **Navigation arrows** list on the right side. The active, selected arrow is indicated by a red dot in the center.

For drawing a new arrow, move the mouse pointer to the desired starting point of the arrow. While holding down the left mouse button, draw the arrow in the desired direction. When you release the left mouse button, the arrow will be placed and simultaneously selected.

You can adjust the size of the selected arrow by dragging the corners or edges of the bounding rectangle with the left mouse button. To change the position of the arrow, move the bounding area while holding down the left mouse button to the desired position.



Navigation name

The **Navigation name** field allows you to enter a label that will appear on the live image when you hover the mouse pointer over the arrow. This display can be toggled on and off from the camera menu. If you don't enter anything, the default label will be the name of the selected target camera.

Target camera

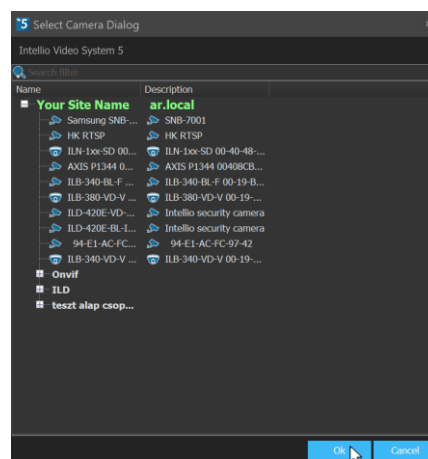
The target camera refers to the camera that will appear when you click on the respective arrow. In the window that appears after pressing the **Select Target Camera** button, choose the desired camera, and then press the **Ok** button.

Navigation arrows

In the list, all arrows placed on the specific camera are visible by name, making it easier to identify and select the arrows.

Go to Target Camera

Using the **Go to Target Camera** button, you can jump to the target camera assigned to the currently selected arrow. This function is useful when you want to create a route starting from one camera.



Back to previous camera

If the camera image displayed in the editor window is already a result of navigation, you can use the **Back to Previous Camera** button to return to the camera from which the navigation occurred.

Back arrow placement

If the camera image displayed in the editor window is already a result of navigation, you can use the **Place Backward Navigation** button to place an arrow to the camera from which the navigation occurred. The target camera and name of the navigation arrow created in this way are automatically set, but can be modified later. If there is already a navigation arrow for that camera, the button is disabled.

Delete selected

The **Delete Selected** button can be used to delete the active, selected arrow.

***Note:** PTZ control takes precedence over camera navigation, so navigation does not work with arrows placed in the PTZ control circle. If you want to place a navigation arrow on a PTZ camera, be sure to place it outside the PTZ control circle.*

15. Camera groups

The cameras can be organized into groups based on certain characteristics, greatly facilitating their overview; for example, cameras located on different levels can be placed in separate groups. To create a group, press the **Create Group** button in the **System Configuration / Devices / Cameras** menu, then enter the name of the new group.

Cameras within the groups can be freely moved by right-clicking on the selected camera, selecting the **Move Cameras to...** option from the pop up panel, and then choosing the target group where you want to move the camera. To change the order of cameras within a group, use the two options above the **Move Cameras to...** button (**Move Up, Move Down**).

The groups themselves can also be sorted. Right-click on the group name, then use the options in the menu that appears to rearrange the order of the groups, or even create subgroups that can be sorted separately. It is also possible to grab the group with the mouse and drag it to the desired location.

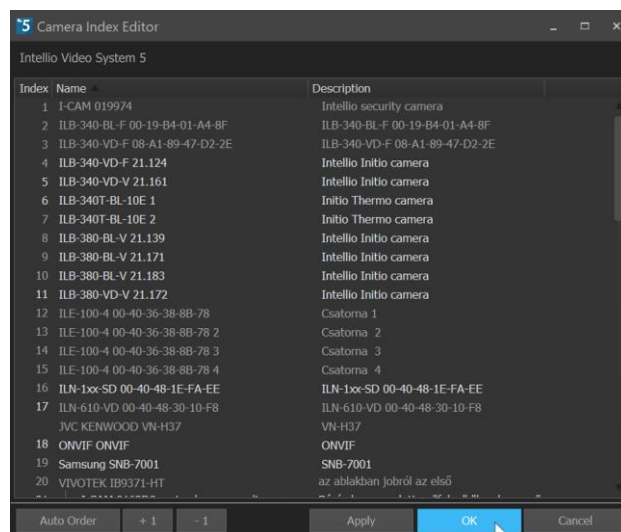
To delete a group, first move all the cameras within it to another group, then select the group name, right-click, and choose the appropriate option from the menu.

16. Edit camera index list

In the **Camera Index Editor** window, you can assign a number to each camera. During live display, entering the index number allows you to view the camera's video stream. This method is faster than dragging the camera with the mouse from the left panel. More information about using index numbers can be found in the *User Guide*.

The Camera Index Editor can be opened by pressing the **Edit Index List** button in the **System Configuration / Devices / Cameras** menu.

The easiest way to assign index values is to use the **Auto Order** button. This automatically assigns a number to each camera in increasing order, overriding previous settings. The order can be changed by clicking on the camera's index, then editing it to the desired number. You can also use the **+1** and **-1** buttons to increase or decrease the index value by one. The client program prevents two cameras from having the same index value. If this happens, the names of the problematic cameras will be highlighted.

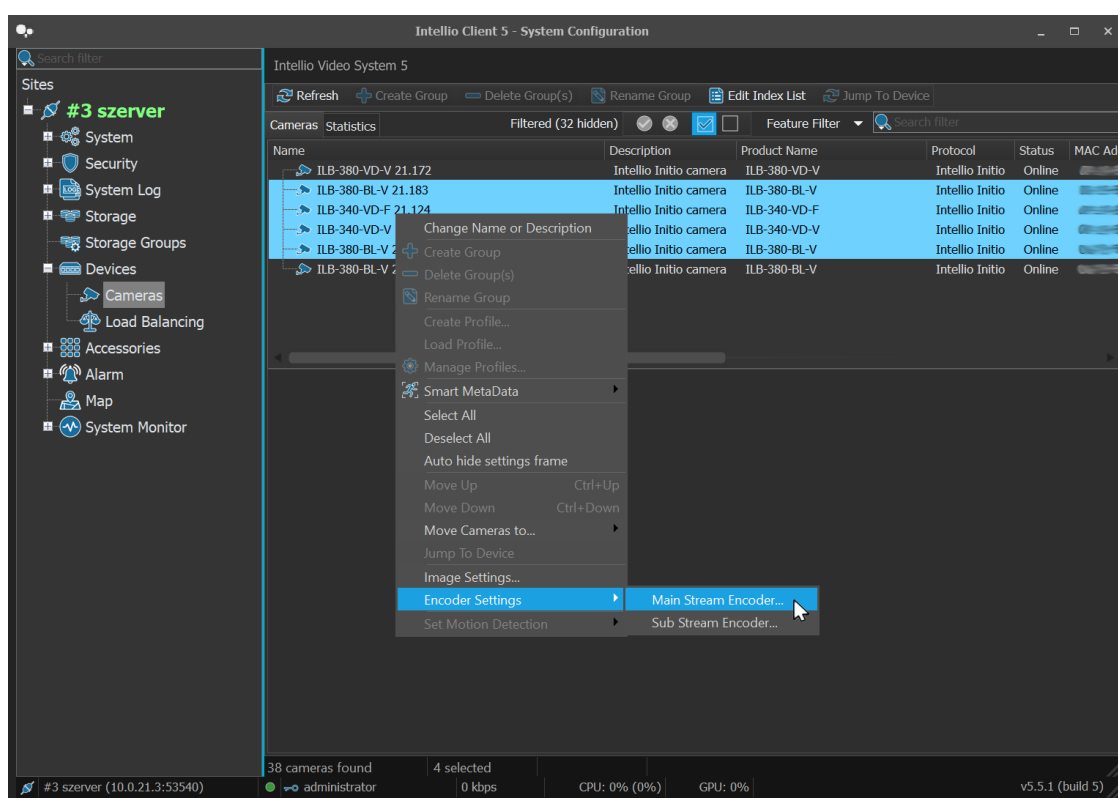


17. Group camera setup

For Initio cameras, there is an option to configure video image and encoder parameters in groups. By using the group setting, you can adjust the parameters of multiple cameras of the same type in one step, saving significant time and ensuring that the settings are consistent.

To use group settings, select the cameras you wish to configure from the **System Configuration / Devices / Cameras** page. To select multiple cameras, use the **Ctrl** or **Shift** keys while selecting. Holding the **Ctrl** key allows you to select individual cameras one by one, while holding the **Shift** key will select all cameras between the selected ones.

Right-click on the list of selected cameras, and in the menu that appears, choose the function you wish to modify.



Group settings can be applied to the following parameters:

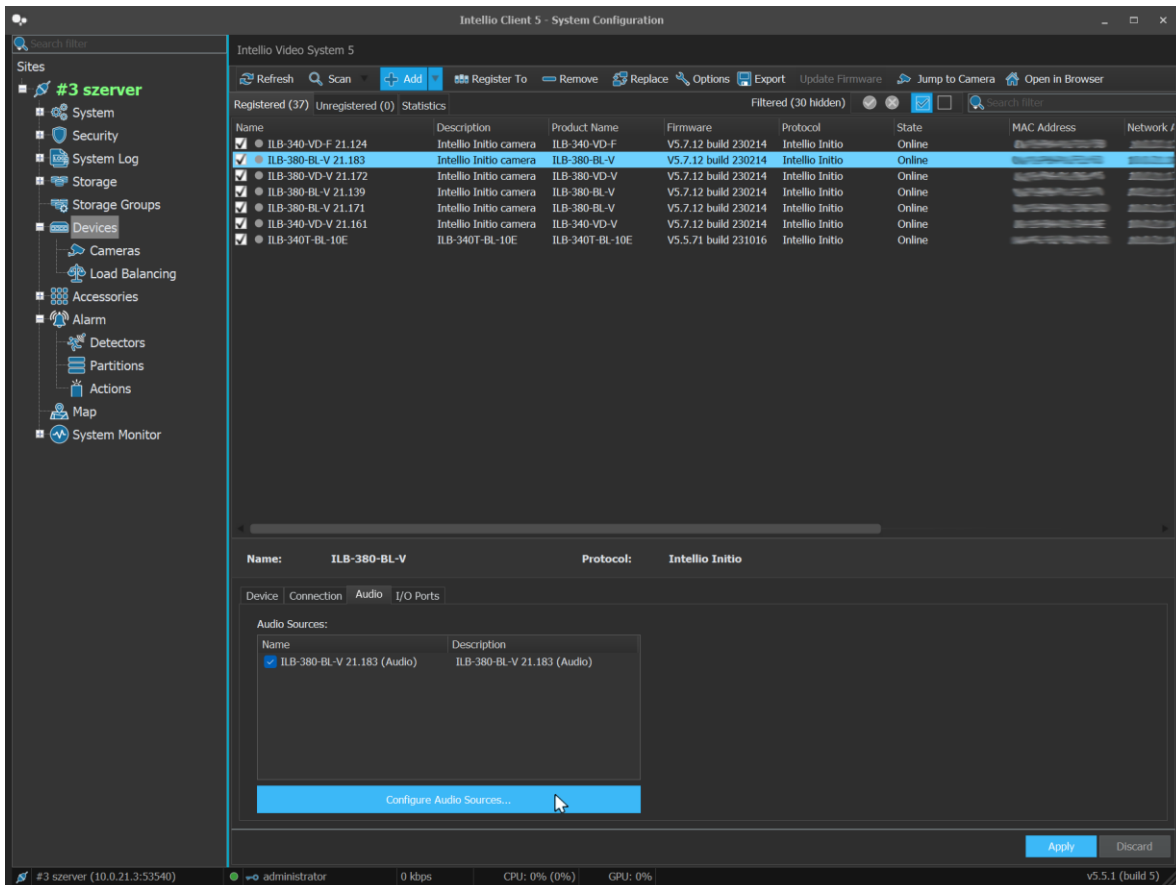
- **Image settings...**
- **Encoder settings**
 - **Main stream encoder**
 - **Sub stream encoder**

When modifying, the familiar setting windows for the respective parameters will appear. The modified data will be displayed in highlighted text, allowing changes to be tracked. When the changes are accepted, only the modified data will be validated for each camera.

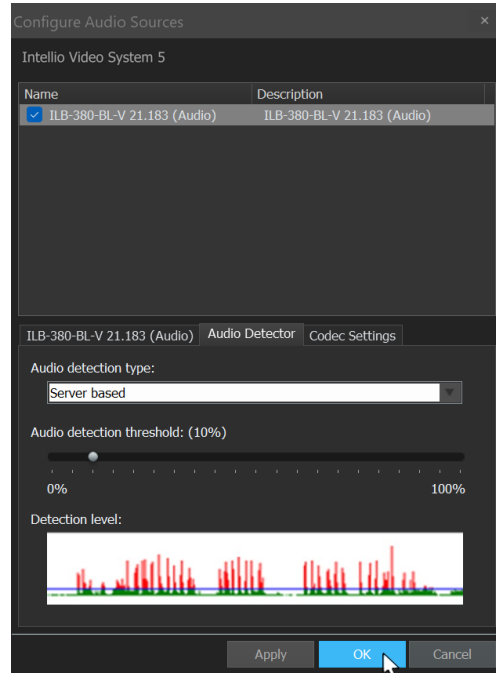
18. Audio settings

The main settings for audio inputs can be found in the respective device: in the **System Configuration / Devices** menu, select the device, then click the **Audio** tab in the device settings panel displayed at the bottom. Here, you will see an overview of the audio input names and statuses associated with the device. To modify the settings, press the **Configure Audio Sources...** button.

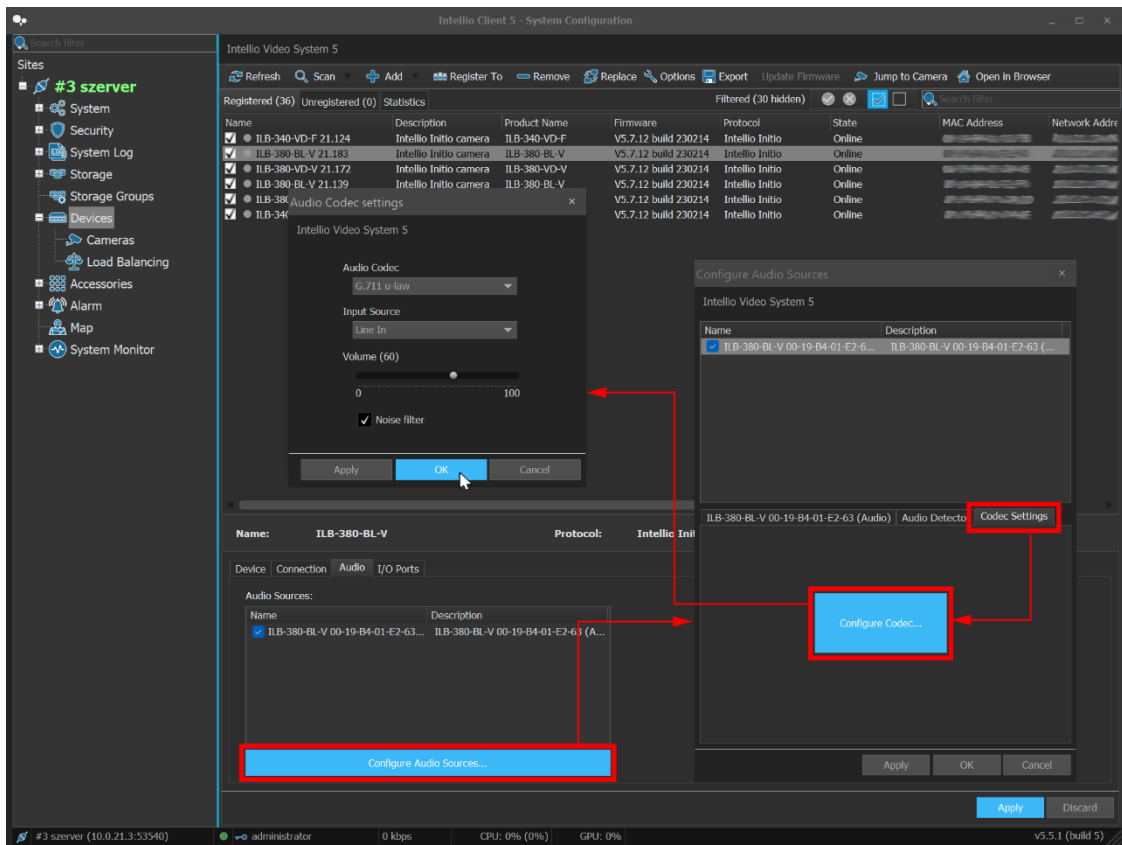
- The **Enabled** checkbox allows you to enable or disable the audio input. If an audio input is not in use, it is recommended to disable it so the system does not process it.
- **Name** and **Description**: assign a name and a more detailed description to the audio input.
- **Select Assigned Cameras...**: configure which cameras you want to associate with the audio channel for live view and playback. Multiple cameras can be selected, but by default, the audio is linked to its own camera. If no camera is selected, the audio channel will appear separately in the Audio Channels toolbar, where it can be toggled on/off and its volume adjusted.



- **Audio Detection** tab: Defines the type of audio detection used for recording:
 - **Disabled:** Audio is not recorded, but it can still be monitored in live view.
 - **Continuous:** Audio recording is continuous.
 - **Server Side:** Allows setting a detection threshold in percentage. The lower section of the window displays the currently detected audio level and the configured threshold value in real time.

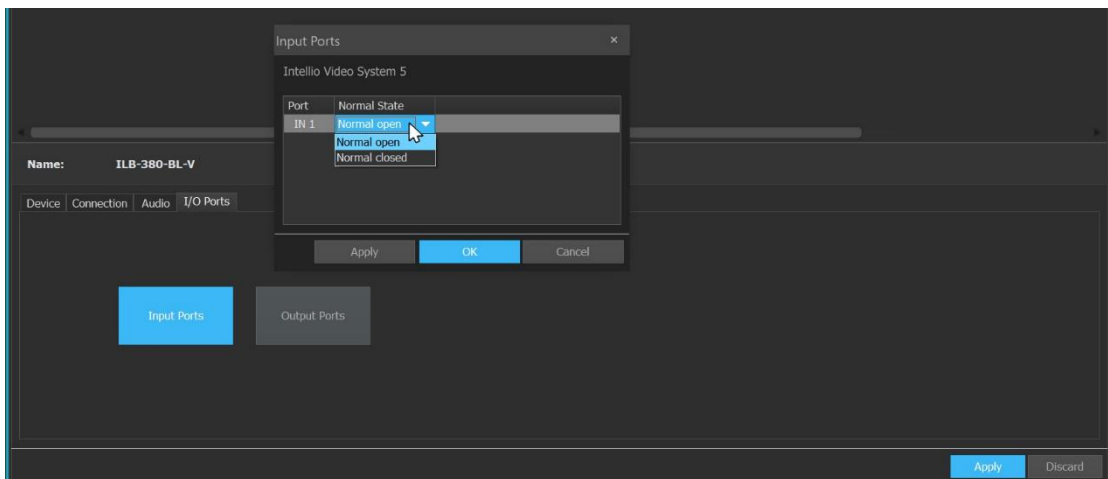


- **Codec Settings** tab: the supported audio formats of the camera can be configured.
 - G.711 PCM u-Law/A-Law (8000 Hz)
 - G.726 ADPCM-16/24/32/40 Kbps (8000 Hz)



19. Manage I/O ports

In the **System Configuration / Devices** menu, select an Initio camera and go to the **I/O Ports** tab. Use the **Input Ports** or **Output Ports** button to open the configuration window. Here, you can set the default values for the input and output ports.



To receive input signals, a **Multi I/O Input** detector must be created:

- Navigate to **System Configuration / Alarm / Detectors** menu
- Click the **Add** button, select a **System**-type detector, choose **Multi IO Input**, then click **Finish**
- In the **Create Multi IO input** window, go to the **Detector** tab, select the desired port, and configure the remaining parameters according to the [General structure of a detector](#) section.

Output control is managed through **Multi I/O Actions**:

- Navigate to **System Configuration / Alarm / Actions** menu
- Click the **Add** button, select **Multi IO Action**, then click **OK**
- In the **Create Multi IO action** window, go to the **Action** tab, check the desired port, and configure the additional action parameters. For more details, refer to the **System detectors and the IVS alarm system** documentation.

20. Camera-side, intelligent device detectors

This section covers the onboard detector settings for Initio cameras only. To gain a comprehensive understanding of the entire IVS alarm system, refer to the ***System detectors and the IVS alarm system*** documentation.

Camera-side detectors described in the following sections must be created **through the IVS system**. Based on the settings, when a detector triggers an event, the event is logged in the Event Log, the Client software can play an alert sound, display camera feeds, etc., according to the parameters set in the Detector configuration window shown in this section.

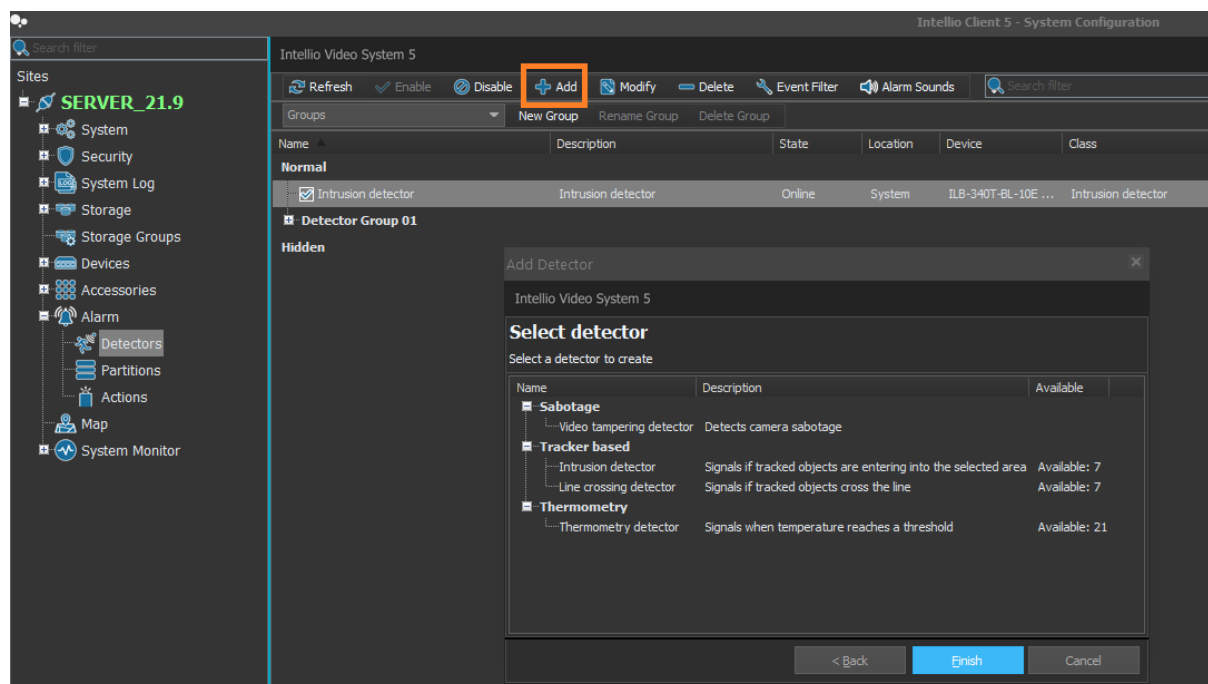
If additional actions are required (e.g., moving to a PTZ preset, sending an email), you must not only add the detector but also configure the **entire alarm system** by creating Partitions and Actions (see ***System detectors and the IVS alarm system*** documentation).

20.1. Add a detector

Detector settings can be accessed through the Client software. The process for modifying and adding detectors is the same after selecting the appropriate detector-camera pair.

- Click the **Add** button in **System Configuration / Alarm / Detectors** and select the **Onboard detector** type.
- Choose the camera where you want to configure the detector, then select the detector type from the list.

Important: In the detector type selection window, you can see the maximum number of detectors that can be assigned to the selected camera and how many are still available.



20.2. General structure of a detector

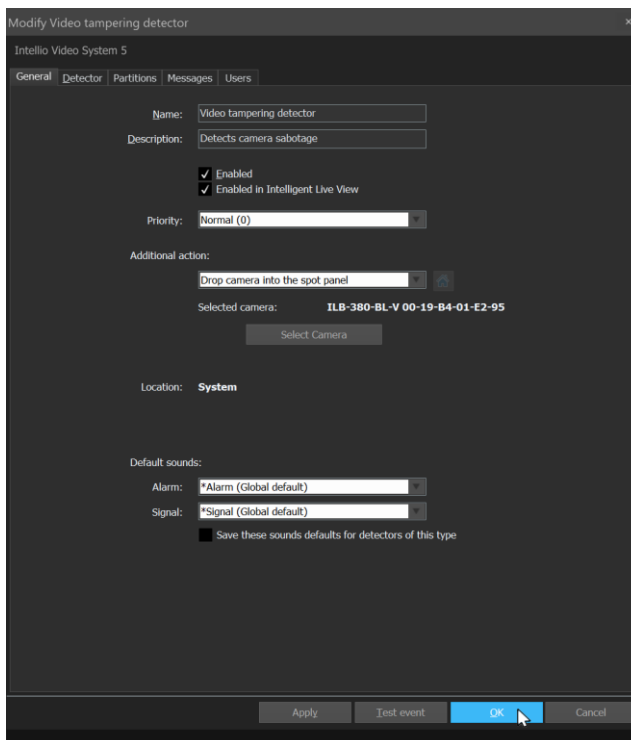
Each detector includes configuration settings across the following five tabs.

20.2.1. General

The detector's **name** and **description** are general by default, so it's recommended to change them for easier identification later (including the associated camera in the name or description can be helpful). Below the name and description, you can **enable** the detector and specify whether the **Intelligent Live View** function should consider it.

Priority controls how events from the detector appear in Spot panels in Live View; higher-priority events will override lower-priority ones.

Additional action allow you to display even a different camera's feed instead of the default one when an event is triggered. This is useful if a sensor is connected to a camera's I/O input, but monitors a different camera's field of view. You can also configure complete view changes, displaying multiple cameras simultaneously when the detector triggers an event.



You can assign a custom sound to the detector's events.

If it is not necessary for each event to have a separate sound, you can simply set the **Default Sounds** for the detector. These will be the default sounds for detector events: **Alarm** for alarm events, and **Signal** for signal events.

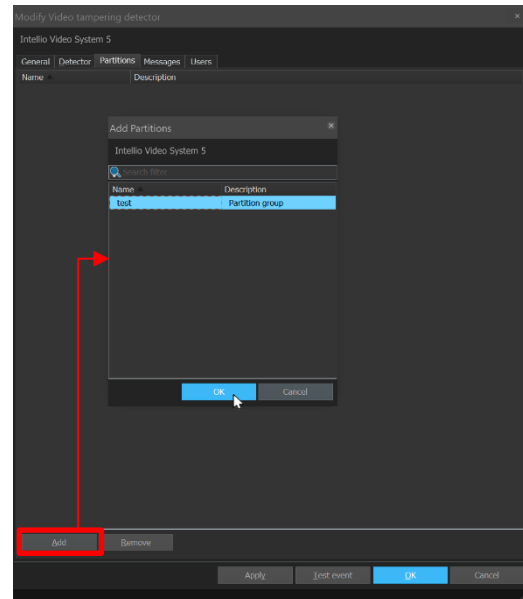
If you want these default sounds to apply to all detectors of this type, check the **Save these sounds defaults for detectors of this type** checkbox. You can also provide your own custom sound file by selecting **Add...** from the dropdown menu at the bottom. The selected sound file will be uploaded by the client to the SITE servers, from where other clients will download it upon their first login (see the **Media Library** section in the *System detectors and the IVS alarm system*).

If you want each event to have a different sound, you can set the sounds for each event on the [Messages](#) tab.

20.2.2. Partitions

The list of partitions to be activated by the detector alarm can be specified here. The partitions only respond to normal events, ignoring technical events.

Important: *if all the partitions associated with a detector are inactive, the detector will not transmit events and alarms! If the detector must always be active, it is recommended to add an always-active partition without any actions to the list of partitions associated with the detector.*



20.2.3. Messages

It is possible to set which events of a given detector are allowed and whether they appear as alarms or simple signals.

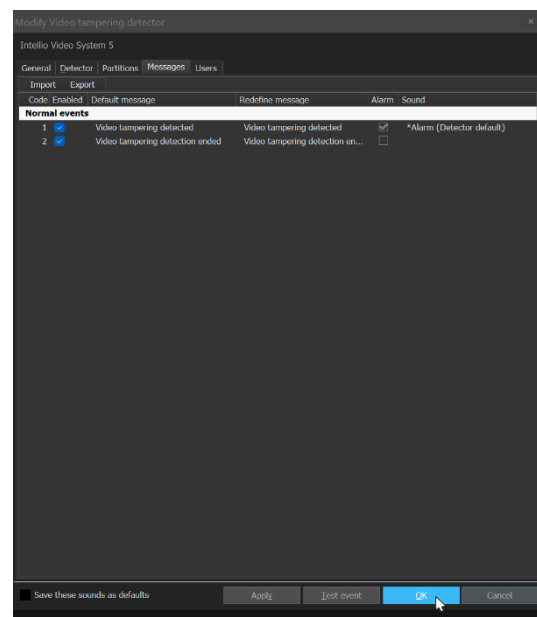
If an event type is checked in the **Alarm** column, an alarm will be triggered when the corresponding event occurs (e.g., the alarm will appear with a red background in the Events panel at the bottom of the Live View).

If only the left-side Enabled box is checked, then only a **Signal** will occur (e.g., the signal will appear in yellow in the Events panel).

You can override the default sounds with custom event sounds. In the **Sound** column, you can open the dropdown menu and select any sound that will play when the event occurs. You can also select your own sound file by clicking the **Add** option at the bottom of the list.

These settings can also be saved to the detector type by checking the **Save these sound as defaults** checkbox at the bottom.

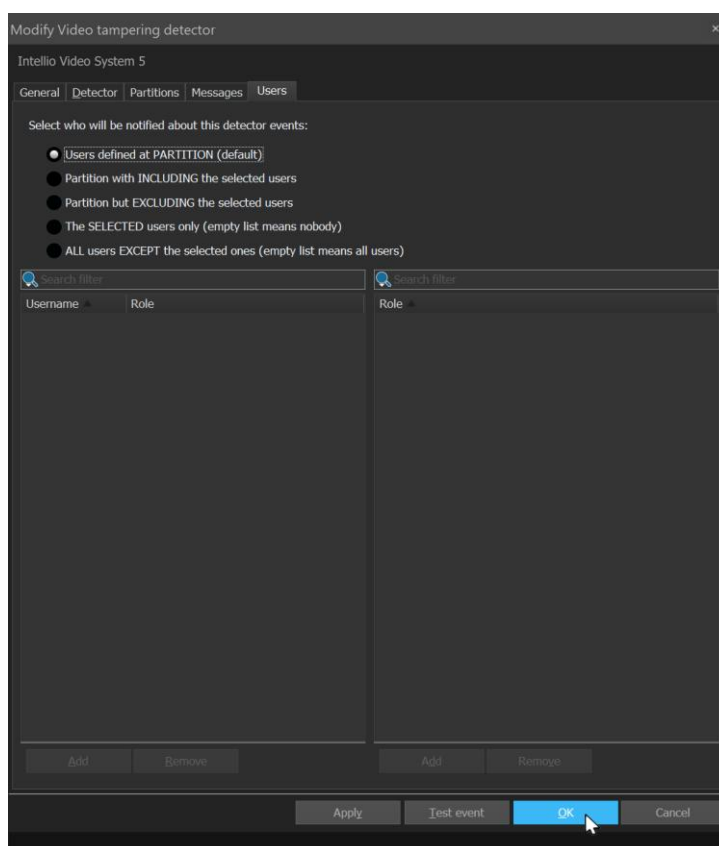
The settings in the Messages tab can be exported and imported, allowing the same message settings to be imported into multiple cameras with the same type of detector.



20.2.4. Users

On this tab, you can specify which users or roles should receive notifications about detector events:

- **Users defined at PARTITION (default):** In this case, only the users and roles specified for the partitions assigned to the detector will receive detector events.
- **Partition with INCLUDING the selected users:** Users and roles specified for the partitions assigned to the detector will receive events, supplemented by those listed here.
- **Partition but EXCLUDING the selected users:** Only the users and roles specified for the partitions assigned to the detector will receive events; those listed here will be excluded.
- **The SELECTED users only (empty list means nobody):** In this case, users and roles specified for the partitions assigned to the detector will not be considered; only those listed here will receive notifications. An empty list means nobody will be notified.
- **ALL users EXCEPT the selected ones (empty list means all users):** In this scenario, everyone will receive events except those listed here. An empty list means everyone will receive notifications.

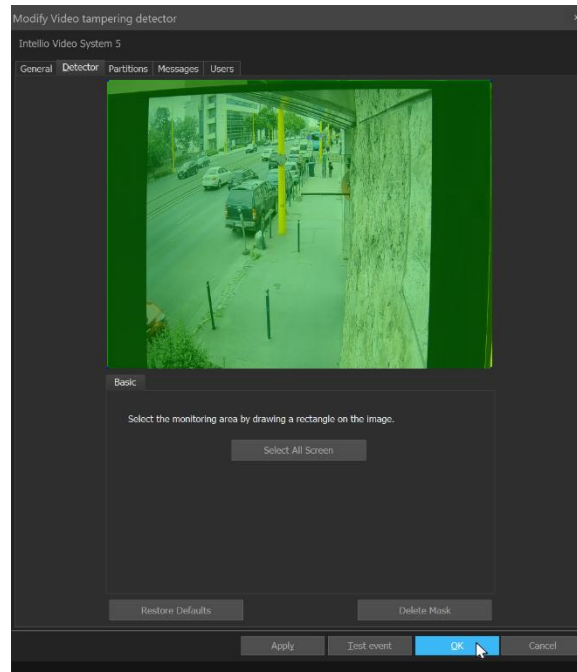


20.2.5. Detector

You can configure the settings for the detectors here. A more detailed description of the built-in detectors for Initio cameras can be found in the following chapters.

20.3. Video tampering detector

The Video tampering detector detects the camera's rotation, obstruction, or blurry image. By using the **Select All screen** button, a complete mask can be created, or a smaller rectangle can be selected with the mouse if you only want to detect changes in a specific part of the camera's image. Only one mask can be defined.



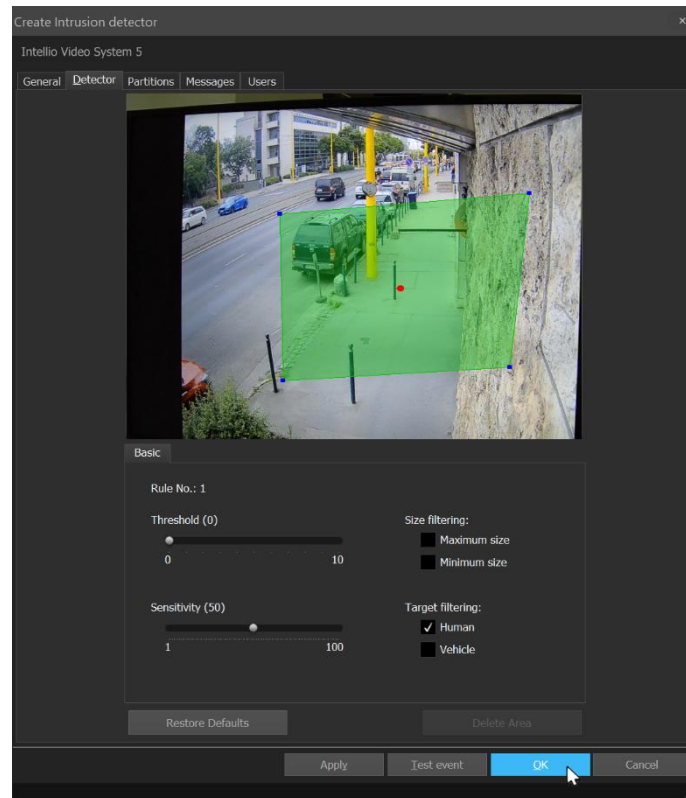
20.4. Intrusion detector

The Intrusion detector triggers an alarm when a moving object enters the masked area. The detector does not send an alarm if the movement occurs inside or outside the area or when an object exits the designated area.

To define the mask, click on the first corner point with the mouse, then continue selecting the adjacent corner points to outline the desired area. The polygon's corner points can be adjusted later, but they cannot be removed or added. If modification is needed, delete the existing polygon and redraw it. The drawing steps are as follows:

- Click the **left mouse button** at the starting point of the shape.
- Define the next corner point using the **left mouse button**.
- Repeat this process until all corner points have been set.
- After defining the last corner point, **right-click** anywhere.

The polygon can be moved after creation by clicking inside the green area and dragging it with the left mouse button.



Configuration of additional detector parameters:

- **Rule Number:** Depending on the camera model, 1-4 intrusion detectors can be created. This field displays the detector's identification number.
- **Threshold:** The threshold time in seconds for an object remaining inside the masked area. If set to 0, the event is triggered immediately upon entering the masked area. This means an intrusion event will be generated if movement persists within the selected area for at least the set delay period, or if the object does not exit or disappear within that time.
- **Sensitivity:** Defines the percentage of the moving object's surface or body part that must enter the masked area to trigger an event. For example, if set to 60, the movement is considered an intrusion only if at least 60% of the body part enters the designated area.
- **Size filtering:** Determines the minimum and maximum size of detectable objects to reduce false alarms. Moving objects smaller or larger than the defined size will not trigger an event.
- **Target filtering:** Depending on the camera model, an event can be triggered upon detecting a human and/or a vehicle. If no category is selected, an event is generated for all categories (human/vehicle/other).

20.5. Line crossing detector

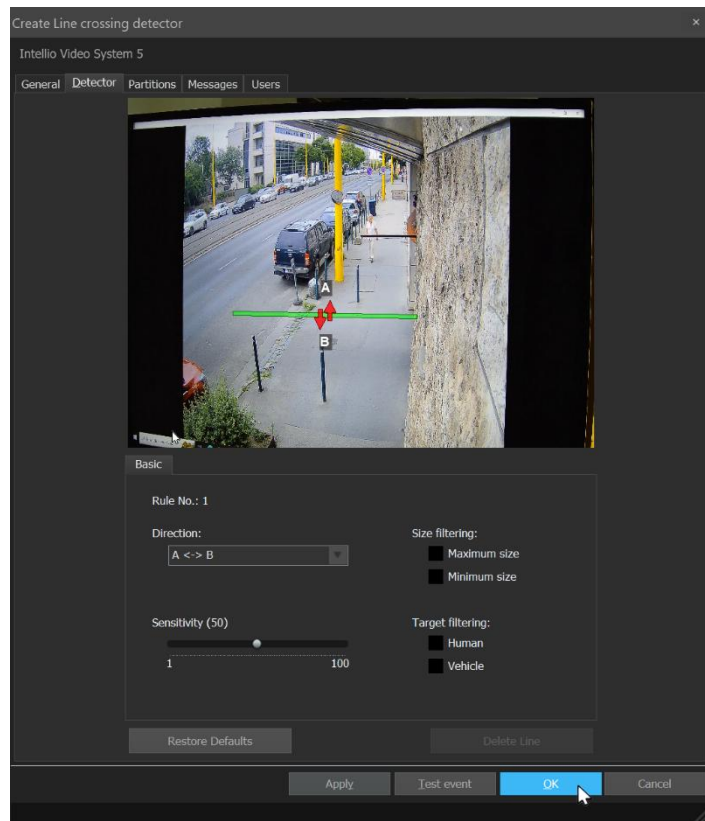
The line-crossing detector triggers an alarm when the predefined line is crossed in the restricted direction.

To define the restricted line, drag both endpoints of the line displayed in the configuration window to the desired positions using the left mouse button.

To delete the line, press the **Delete Line** button.

In the **Direction** drop-down menu, specify the prohibited movement direction.

The additional parameter settings for this detector are the same as those defined for the [Intrusion detector](#) of the same name.



21. SmartSearch: search with post-generated detectors

Initio cameras can track people, vehicles, and other categorized objects moving within their monitored area. These metadata are also transmitted to the IVS server, which can store them for later use. Stored metadata can be searched quickly using **Virtual Detectors** created afterward.

The requirements and necessary settings for searching with Virtual Detectors and receiving SmartMeta data can be found in the *Smart features* documentation.

Information about creating Virtual Detectors and using the **Intelligent Motion Search** and **Intelligent Object Search** interfaces is available in the *User's manual*.

22. SmartLive: server-side, live, Smart MetaData-based detectors

In addition to the onboard detectors of the camera, server-side **SmartLive** detectors can also be created based on metadata from moving objects detected by Initio cameras. These include Motion, Entry/Exit, Direction detection, and Line Crossing detectors that trigger instant alerts. The object category information detected by the cameras can be expanded or validated using the **SmartAI** function.

For detailed information on SmartLive detectors and basic requirements, refer to the *Smart features* documentation.

Depending on the settings, when a detector triggers an event, the event is logged in the Event Log, the client software may play an audio notification, display camera images, etc. If additional actions are required (e.g., jumping to a PTZ preset, sending an email), the **complete alarm system** must be configured in addition to adding the detector. This includes creating Partitions and Actions (see *System detectors and the IVS alarm system* documentation).

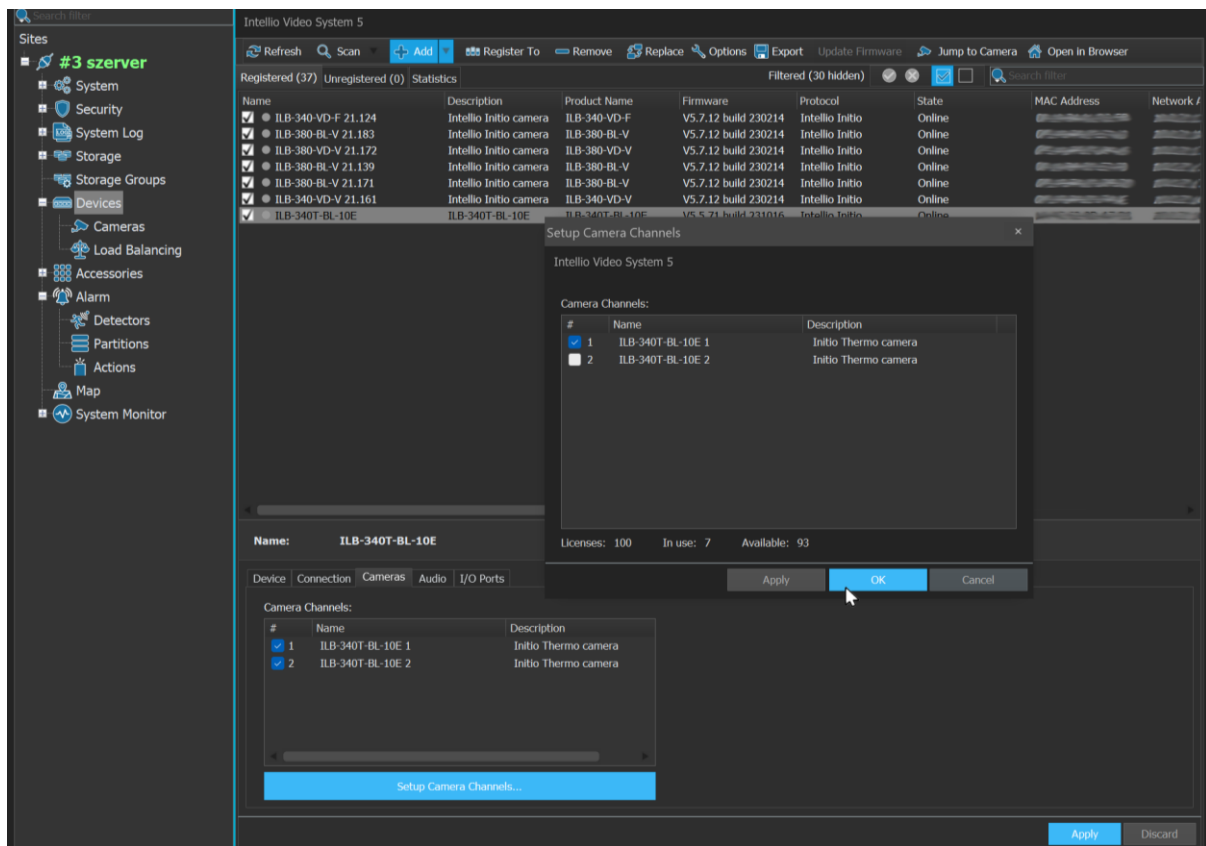
23. Thermal camera

The Intellio Thermal Camera is a model equipped with both thermal and optical sensors, capable of providing both visible images and thermal images that are invisible to the human eye. Its primary function is to monitor large-distance areas using Line Crossing and Intrusion detectors, as well as to detect temperature changes in designated areas, points, or along lines within the image.

The installation and configuration of the thermal camera are similar to standard Initio cameras; therefore, only the unique and special features are highlighted here. As with other Initio cameras, the general and detector settings of thermal cameras should be configured within IVS. Only modify settings via the camera's web interface if they are not available in IVS. The detectors associated with the camera operate on the thermal video channel, meaning that detectors must also be created on the thermal image channel.

23.1. Set up video channels

After registering the thermal device, its two video channels will appear under **Devices**, where they can be individually enabled or disabled.



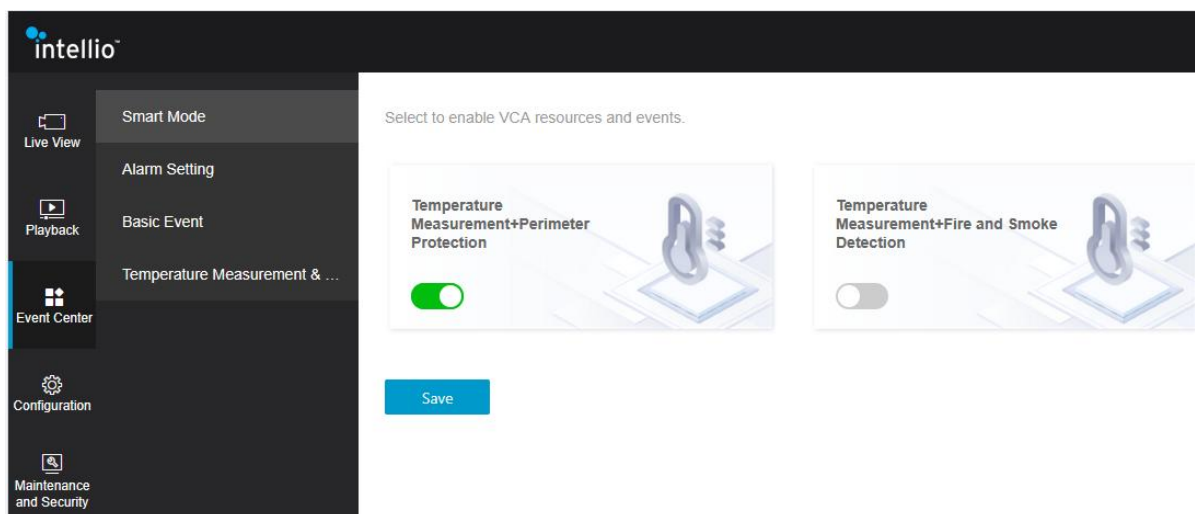
In the **Devices / Cameras** list, the two video channels appear separately. Each video channel must have its image and compression settings configured individually, as well as its motion detector and, if necessary, its privacy zones. These settings are the same as those for normal Initio cameras.

23.2. Detectors

In IVS, the following thermal camera detectors and their event reception are supported:

- Sabotage detector,
- Intrusion detector,
- Line crossing detector,
- Temperature measurement detector,
- Temperature difference detector.

To manage and enable the required detectors within IVS, it may be necessary to select the appropriate camera operating mode on the camera's web interface. To access the detectors listed above, select the **Temperature Measurement + Perimeter Protection** option:



23.2.1. Sabotage, intrusion, line crossing detector

The [Video tampering](#), [Intrusion](#) and [Line crossing](#) detectors are configured in the same way as with normal Initio cameras.

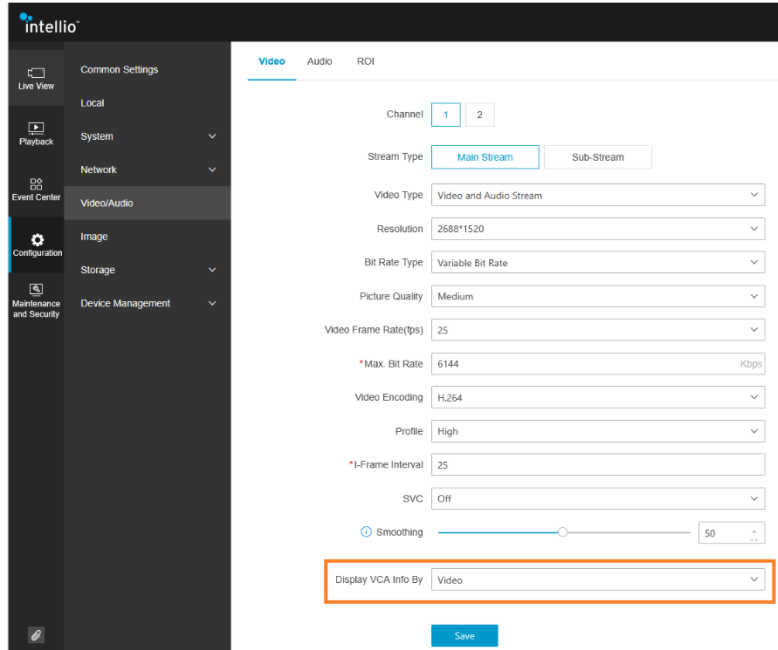
23.2.1. Temperature detector

There are 3 different measurement options for this detector:

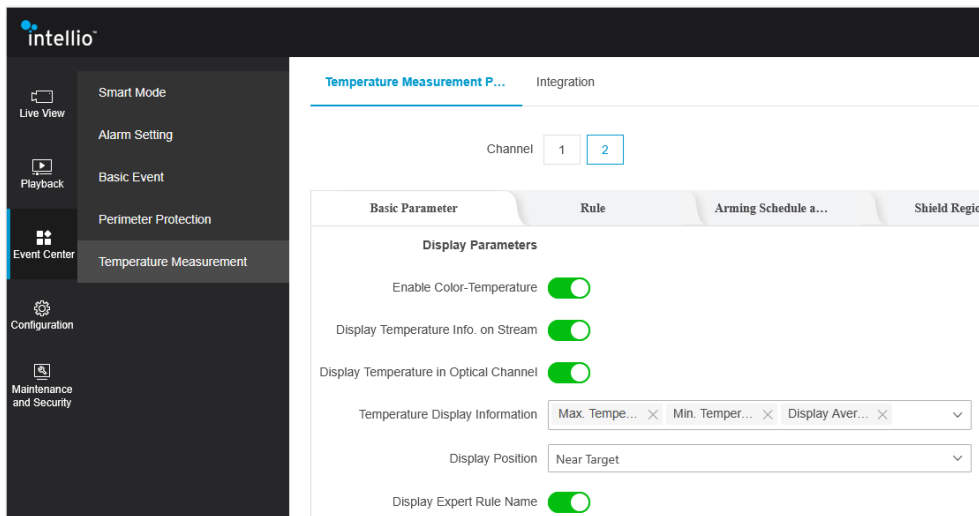
- Temperature measurement within a designated area,
- Point temperature measurement,
- Temperature measurement along a line.

If you want to display the selected areas or the measured values on the camera image, switch the **Display VCA Info by** option to **Video** in the **Video/Audio** menu on the camera's web interface.

In this case, however, the camera will not send **SmartMeta** data to the server. As a result, server-side detectors (**SmartLive**, **SmartAI**) will not work, and SmartMeta-based server-side search functions cannot be performed either (see **Smart Features** documentation).



In the **Event Center / Temperature Measurement** menu, select exactly which values and labels you would like to display.



23.2.1.1. Temperature measurement in an area

Define measurement area

In the Detector panel of the setup window, specify the area within which you want to measure temperature using a mask. To define the mask, click on the first corner point with the mouse, then continue selecting the adjacent corner points to outline the desired area. The polygon's corner points can be adjusted later, but they cannot be removed or added. If modification is needed, delete the existing polygon and redraw it. The drawing steps are as follows:

- Click the **left mouse button** at the starting point of the shape.

- Define the next corner point using the **left mouse button**.
- Repeat this process until all corner points have been set.
- After defining the last corner point, **right-click** anywhere.

The polygon can be moved after creation by clicking inside the green area and dragging it with the left mouse button

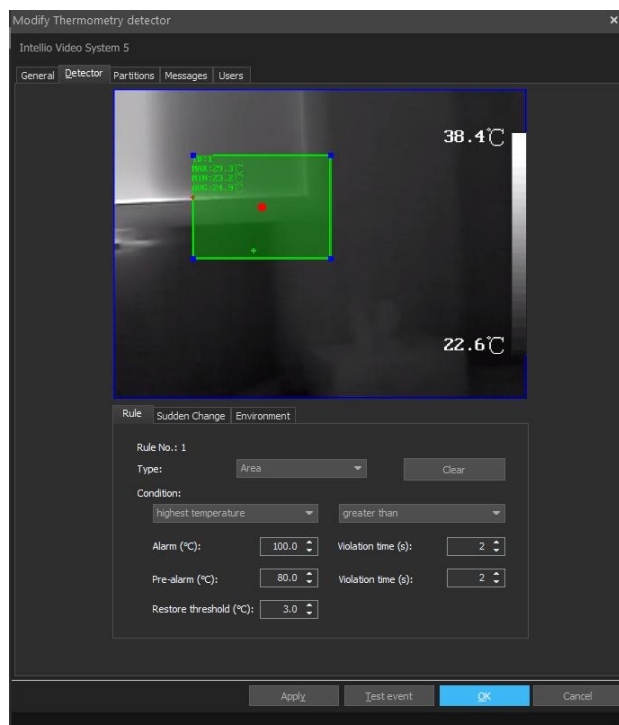
Rule

Rule number: 21 temperature measuring detectors can be determined on the image of the thermal camera. Here is the serial number of the detector.

Type: In the drop-down menu you can choose area, point and line type temperature detector. Use the **Clear** button to delete the placed mask.

Condition: Using the dropdown menus, you can define whether the system should trigger an event for the maximum, minimum, average, or temperature difference above or below a specified value. For the selected condition, you need to provide the temperature value that will trigger the alarm event (Alarm), as well as a pre-alarm value (Signal).

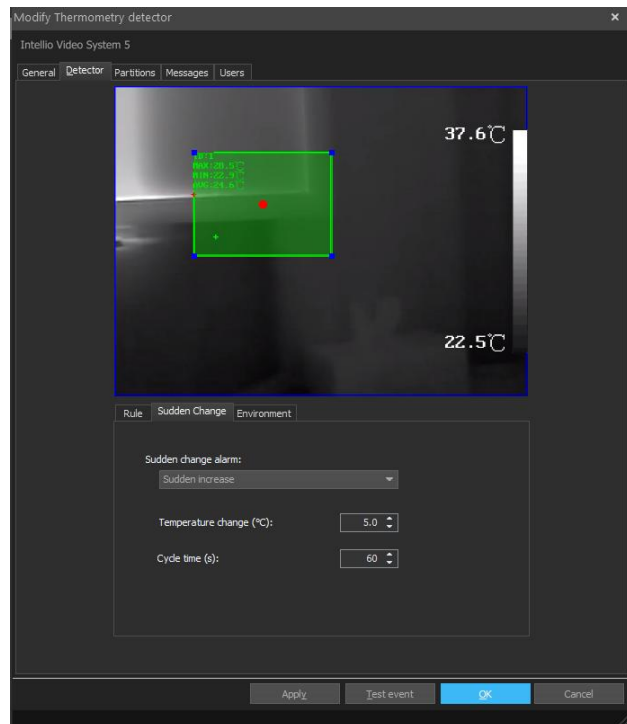
By setting the **Restore threshold**, you can ignore desired fluctuations in temperature. Both the alarm and pre-alarm can have a **Violation time** set to further reduce the number of unwanted events. An event will only occur if the set conditions persist beyond the defined time period.



Sudden change

In addition to the predefined Pre-Alarm and Alarm temperature values, it is also possible to trigger an event in case of a sudden temperature change.

Specify how many degrees Celsius — meaning what level of **Temperature change** — should trigger an alarm, and also set the alarm **Cycle Time**.

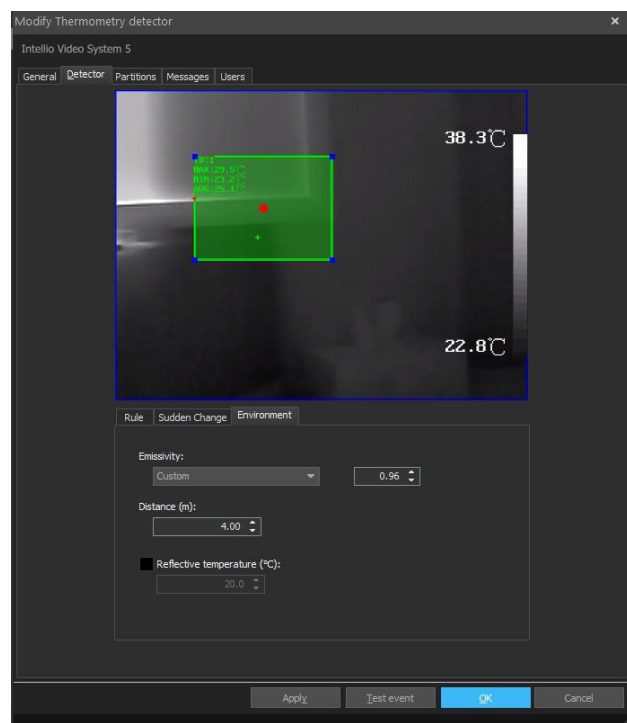


Environment

The **Emissivity** value should be set according to the material of the object being measured. Generally, in the 8-14 μm range, the value is 0.96, but the emissivity values for different materials can be found online. For example, values for some materials can be found at this [link](#).

The **Distance** between the thermal imaging camera and the surface to be measured must also be set.

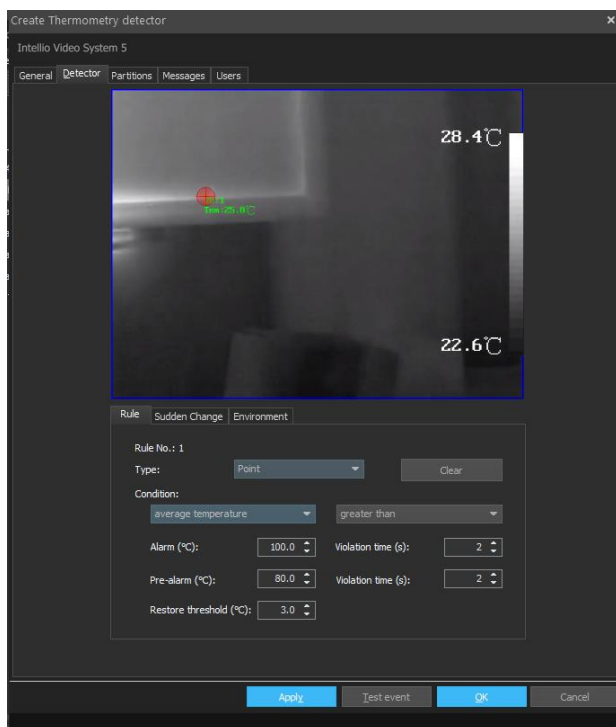
The **Reflective temperature** value needs to be set when an object reflects onto the surface being measured (such as a mirror), or if there is a radiating object near the surface being measured that could influence the reading. If necessary, input the temperature of the reflecting object.



23.2.1.2. Point temperature measurement

To define the measurement point, drag the red dot that appears in the Detector panel of the settings window to the desired position using the left mouse button.

The other settings for the detector are the same as the ones described in the previous point

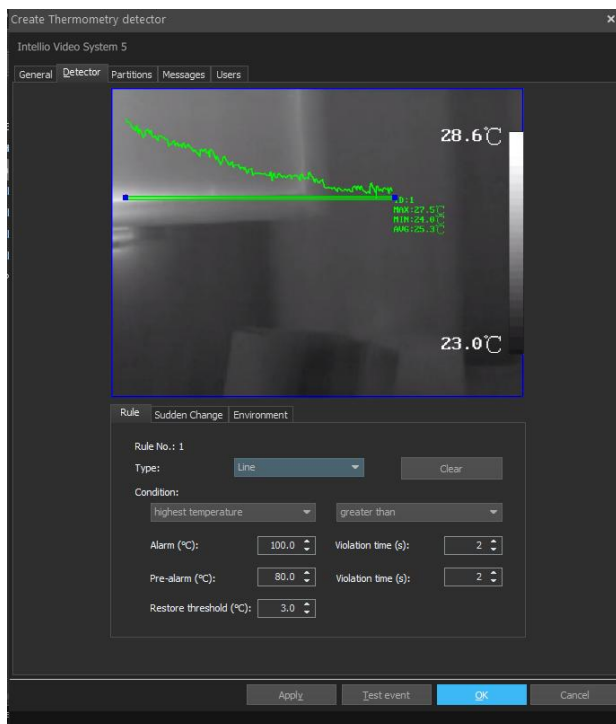


23.2.1.3. Temperature measurement along a line

The thermal camera measures the temperature along the drawn line. To position it, drag the two ends of the line that appear in the Detector panel of the settings window to the desired positions.

A total of 1 line detector can be defined.

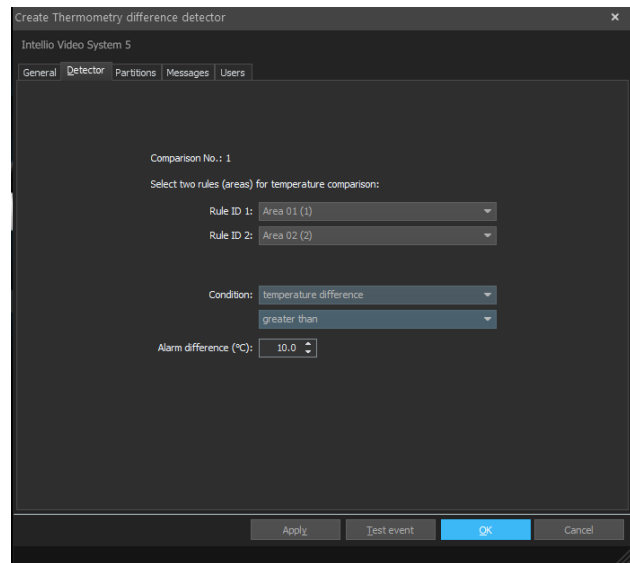
The other detector settings are the same as the ones described in the previous point.



23.2.2. Temperature difference detector

The detector generates an event when the temperature difference between two different area-type temperature detectors reaches the configured threshold value.

A total of 4 such detectors can be created.



24. PTZ camera

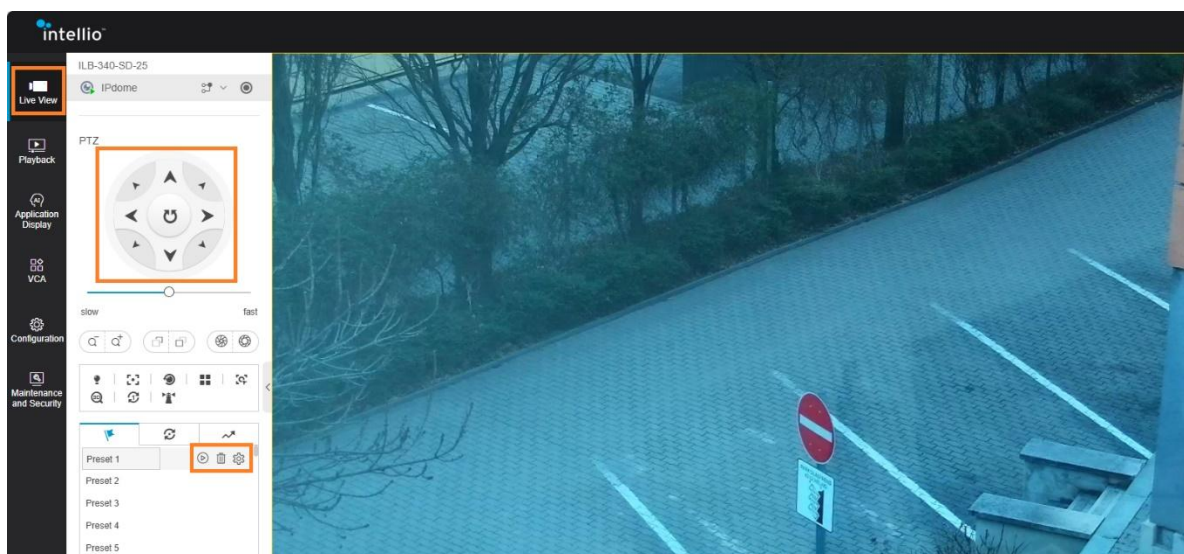
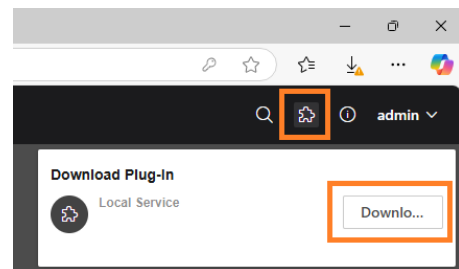
The installation and setup of the Intellio PTZ camera is similar to the standard Initio camera, so only its different and special functions are highlighted here. As with the other Initio camera settings, the general (image, encoder) settings for PTZ cameras should also be done in the IVS. The camera automatically transfers metadata of moving objects, so if the camera is in a fixed position, SmartSearch post-event searches, or live, onboard or server-side detector alerts can be implemented.

24.1. Set up Manual tracking

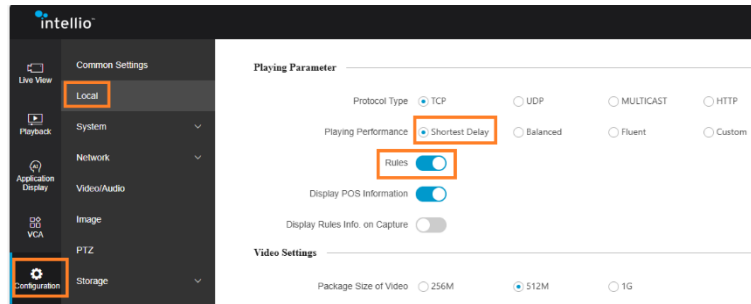
With manual tracking, on the IVS client Live view interface, it is possible to select a moving object by left-clicking the mouse while holding the Alt key on the keyboard. This allows the PTZ camera to automatically zoom in on the moving object and track its movement until it disappears from the camera's field of view or the set tracking time expires. After that, the camera returns to its original position.

The steps to enable and configure the manual tracking function:

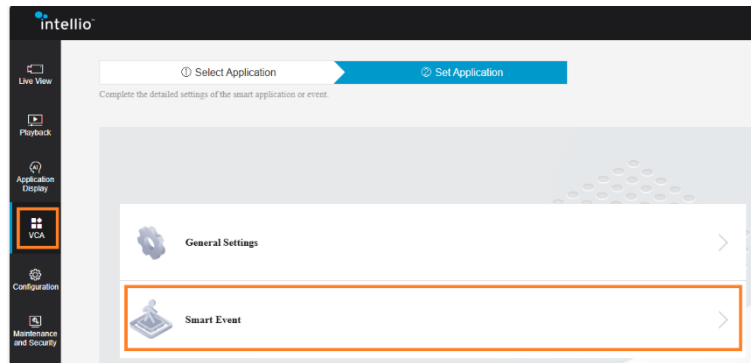
- **Activate** the camera using the **Intellio Device Explorer** program and set the camera's IP address.
- Access the camera's **web interface**, and after logging in, install the **plug-in** available via the icon in the upper right corner. Then restart the browser and log in again.
- In the Live view menu, set **fixed preset** positions in the areas covered by the PTZ camera. Use the arrows to position the camera at the desired position, then press the gear icon next to the presets to save the preset. The set position can be recalled using the corresponding preset number. Make sure to set all desired positions within the camera's coverage area.



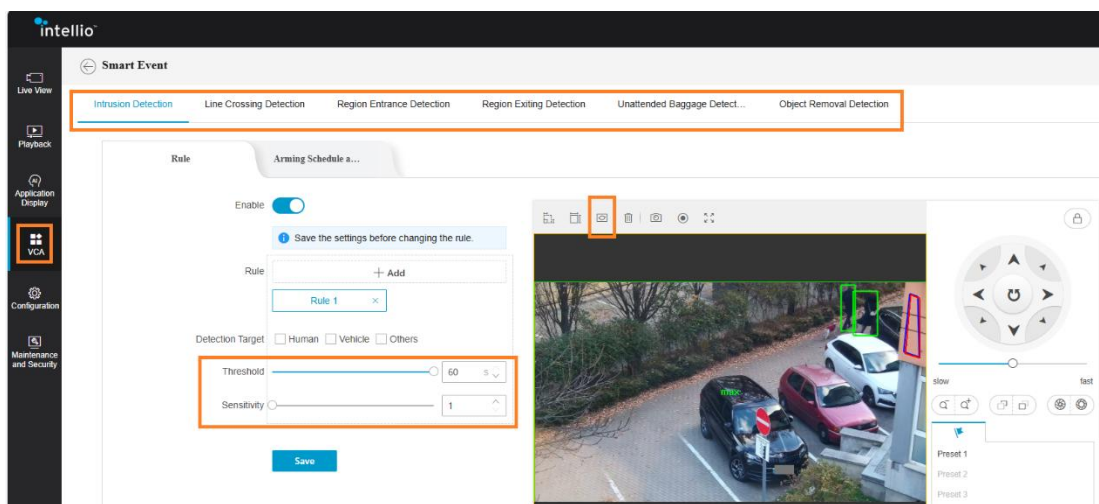
- In the **Local** settings menu, enable **Rules** to display and set **Playing Performance Shortest Delay**.



- Go to the **VCA** menu and enter the **Smart Event** menu.



- Then, set up detector rules for the PTZ preset positions that will not trigger automatic events. This ensures that no automatic tracking is initiated when the detector is triggered, as the goal is manual tracking. Draw an area, line, or define other detectors and their settings in a way that they do not cause events (for example, in the illustration below, a detection area drawn on a wall is unlikely to trigger an intrusion event). This effect can be further enhanced by setting Sensitivity to the minimum, Threshold to the maximum, and adjusting the min/max size parameters to values that do not match any object expected in the scene.

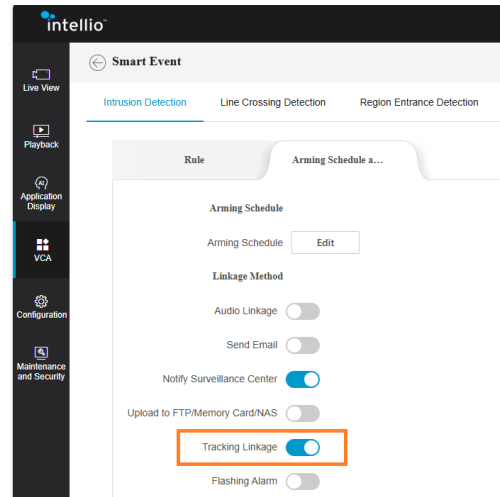


Define detector rules so that manual tracking will only function if at least part of a detector's drawn rule is visible within the camera's field of view. The key requirement is that some portion of the drawn rule is visible—this means that for overlapping preset positions, it may not be necessary to define rules for every single preset.

Verify that in the Live view, at least part of the blue-colored rule is visible (for example, part of the drawn rectangle, line, etc.), and that moving objects are highlighted with a green frame when present.

When adding multiple rules within the same detector type (e.g., Intrusion Detection), first, add an additional rule (e.g., Rule 2), select the desired preset position from the preset list (e.g., Preset 2), draw the rule (e.g., for Intrusion Detection, define a Detection Area rectangle), and save the rule settings. A maximum of 4 rules can be defined within a single detector type.

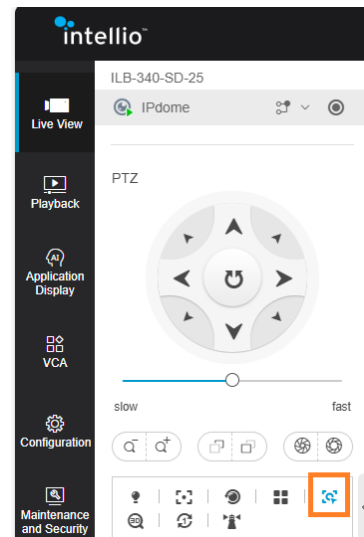
If additional rules need to be added using other detectors (e.g., Line Crossing), follow the same rule definition process described above. Additionally, ensure that the **Tracking Linkage** function is enabled.



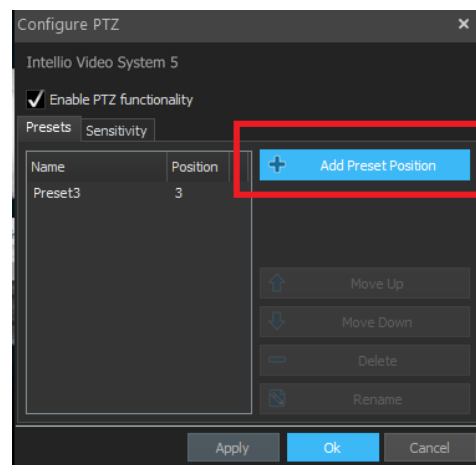
- On the camera's web interface Live view, verify that manual tracking is functioning in the preset positions and the desired area within the camera's field of view. A portion of at least one detector rule, such as the drawn (blue-colored) shape (line, rectangle, etc.), should be visible in the selected positions.

Press the **Manual Tracking** button; the button will turn blue, indicating that manual tracking is enabled. Click on a moving object (a person, vehicle), and the camera will follow the selected object.

If tracking functions correctly in the desired positions, as described above, it will also work in IVS.



- Register the camera in IVS, then navigate to **System Configuration / Devices / Cameras**. Under the **PTZ** tab, click on **Configure PTZ** button to open the settings window. Add the previously defined presets to IVS. Once presets are registered, you can use the manual tracking function in the live view interface by holding **Alt** and clicking the left mouse button on a moving object. Another key advantage of registering presets is that they allow for more efficient footage searches based on preset filtering. For more details, refer to the ***User's Manual*** under the **Preset-Based Playback** section.



25. Further steps

For an overview of additional system settings, please refer to the ***IVS Installation Manual*** documentation and continue configuring the system by creating Alarm system.