



Operating Instructions

i-PRO Active Guard Plug-in for Video Insight



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1. INTRODUCTION

1.1. FEATURES

1.1.A. Terms in use

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1.1.D. Abbreviations

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1.1.E. Disclaimer of warranty

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- (7) ANY PROBLEM, DAMAGE OR COMPLAINT CAUSED BY THE OPERATION BY A MALICIOUS THIRD PARTY.

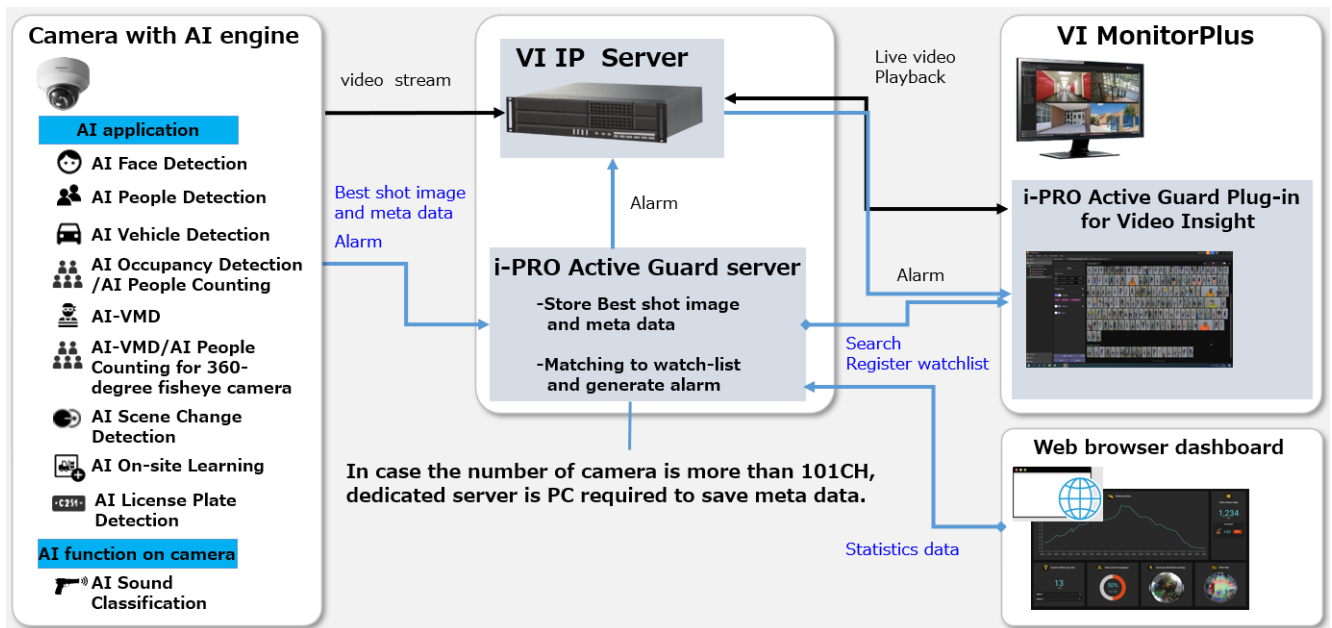
1.2. PREFACE

Setup is required before using the plug-in. Please refer to i-PRO Active Guard Setup Instructions for Video Insight.

This operating manual is for dashboard function of i-PRO Active Guard Plug-in.

Regarding the operation of dashboard of i-PRO Active Guard server, please refer to i-PRO Active Guard server dashboard Operating Instructions.

1.3. SYSTEM OVERVIEW



AI application or AI function on cameras transmit video stream to VI IP server and transmit Best shot images and meta data to i-PRO Active Guard server.

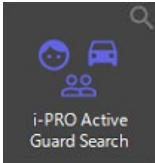
i-PRO Active Guard server stores those data and also generate alarm when face, people, vehicle or LPR is matched to watchlist.

i-PRO Active Guard Plug-in (hereinafter referred to as "Plug-in") which is the plug-in software for VI MonitorPlus can search Best shot images, register watchlist, show live video, recorded video, and alarm. By visualizing statistical data from AI application on the web browser, it can also be used for business intelligence.

2. i-PRO ACTIVE GUARD PLUG-IN

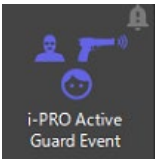
2.1. STARTUP AND TERMINATE PLUG-IN

Plug-in has two functions as below.



i-PRO Active Guard Search

By using various features, enables to search Best shots of objects such as people, face, and vehicle that AI camera recognize.



i-PRO Active Guard Event

Enable to monitor live events that AI cameras recognize. Detected past events can be searched.

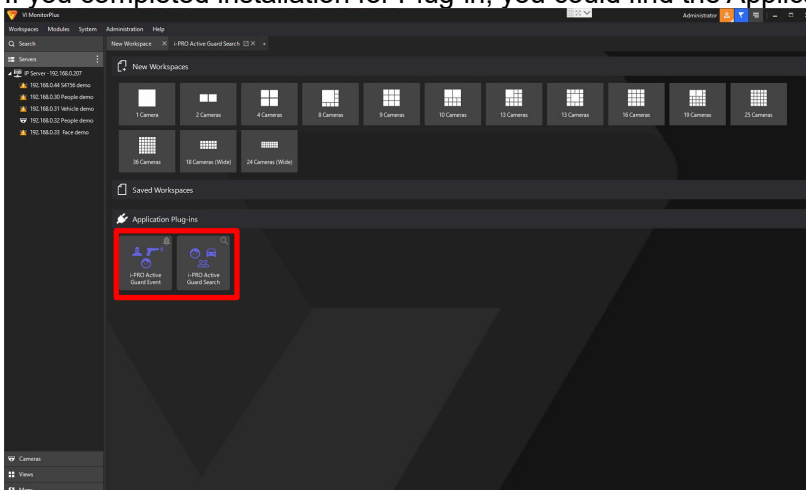
2.1.1. Start-up plug-in

To open plug-in, start-up VI MonitorPlus and log in first.

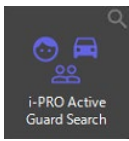
For more detail about VI MonitorPlus, refer to the VI MonitorPlus user manual.



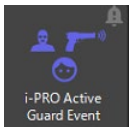
If you completed installation for Plug-in, you could find the Application Plug-ins as below.



To start-up i-PRO Active Guard Search, click the plug-in icon.

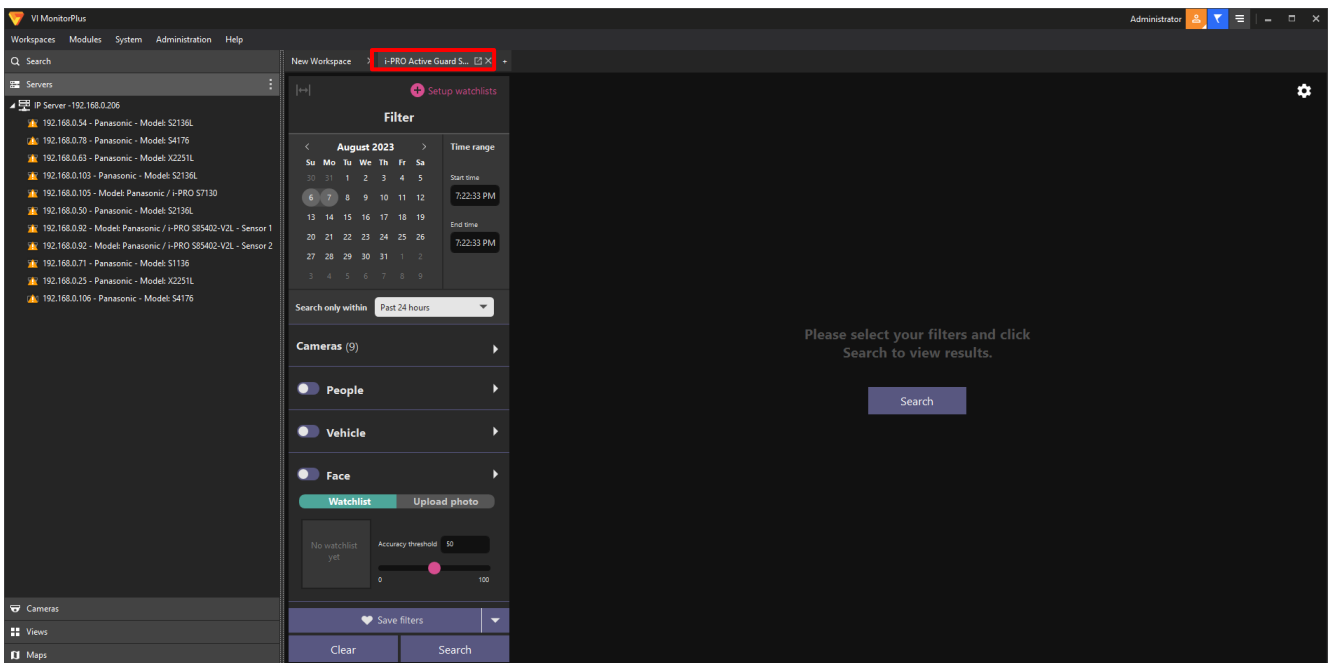


To start-up i-PRO Active Guard Event, click the plug-in icon.



2.1.2. Terminate plug-in

To terminate i-PRO Active Guard Search or i-PRO Active Guard Event, just close the workspace.



2.2. SEARCH DETECTED OBJECTS

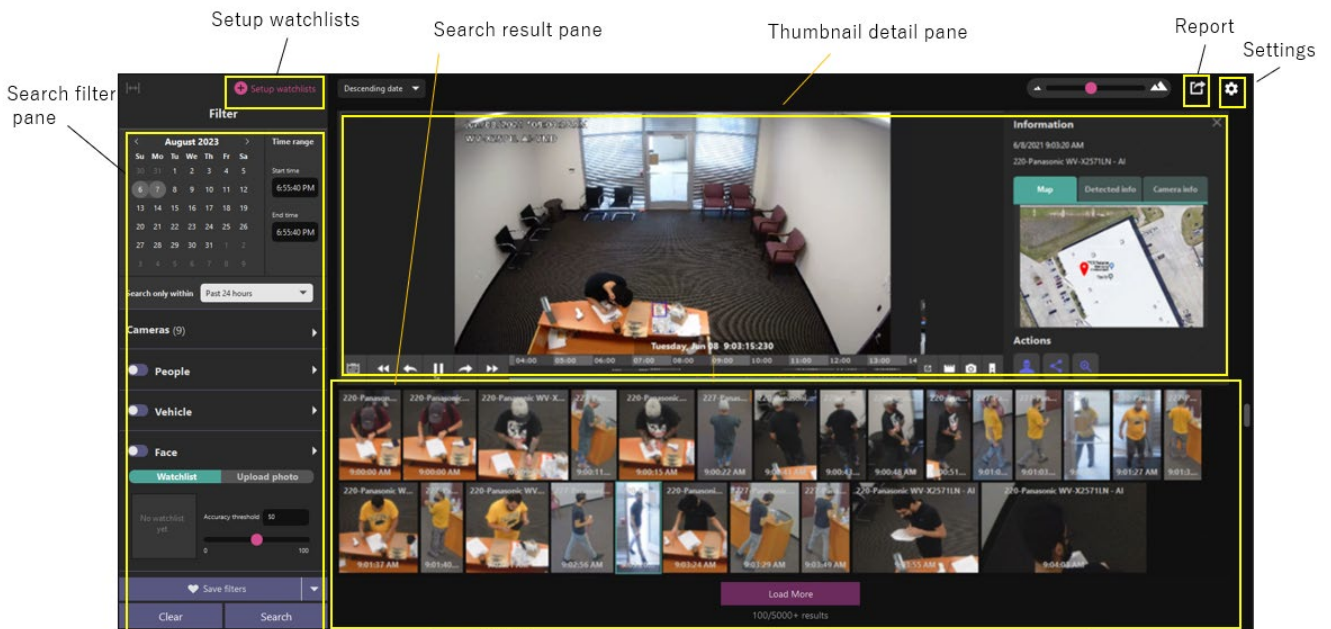
Using i-PRO Active Guard Search, you can quickly find thumbnails of AI Camera detected objects including person, vehicle, and face.

2.2.1. UI Component

i-PRO Active Guard Search has three main parts such as search filter pane, search result pane and thumbnail detail pane, also has watchlists menu and other settings.

2.2.1.1. Overview

In this section, it describes the elements that compose the recording search.



Search filter pane	Date/Time filter	Start time and end time for search objects.
	Search only within	Select from Past 24 hours/Past week/Past month/None. - When select other than None, Date/Time filter are ignored. - When specify Date/Time filter, this setting will automatically become None.
	Cameras filter	Specify AI Cameras for search objects.
	People filter	Specify personal features such as gender, age, hair color, etc.
	Vehicle filter	Specify vehicle features such as type, color, etc.
	Face filter	Specify face image from watchlist or upload photo.
	LPR filter	Specify license plate features such as type, color, and license plate, etc.
	Save filters	Save filter settings with name up to 12.
	Clear	Clear filter settings.
	Search	Start thumbnail search.

Search result pane	Sort	Sort search results by descending, ascending and analysis score.
	Zoom in/out	Zoom in and out thumbnail results area.
	Detected thumbnail	Click and open thumbnail detail pane. Right click and save the thumbnail as picture or video clip. Up to 10 thumbnails can be selectable at the same time by using “Ctrl” or “Shift.”
	Results count	Show the thumbnail search results count.
Thumbnail detail pane	Thumbnail detail pane	Video control, information such as camera location, analysis score and camera information. Refer to “2.2.1.3” for detail.
Set up watchlists	Face watchlist	Setup face watchlist.
	People watchlist	Setup people watchlist.
	Vehicle watchlist	Setup vehicle watchlist.
	LPR watchlist	Setup lpr watchlist.
Report	Export HTML	Export search result as HTML.
Settings	Preferences	Setup some environments for playback, event monitor etc.
	Software update	A notification and pop-up will appear when the i-PRO Active Guard Server or plug-in are available for updates. *Only when i-PRO Active Guard servers and Plug-in can connect to the Internet.
	Attribute Settings	Setup visibility of attributes in filter and watchlist.

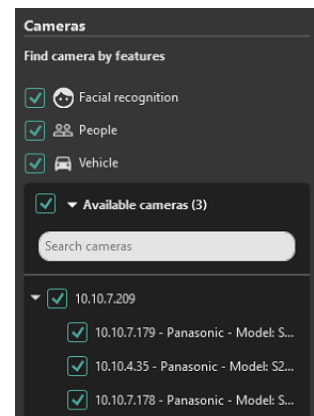
2.2.1.2. About search filters

In this section, it describes search filters that can narrow the search results down.

Please refer to the documentation below regarding setup of cameras and map.
i-PRO Active Guard Setup Instructions for Video Insight.pdf

A. Camera filter

Select the cameras to be searched from the available camera list. Using Find camera by features, you can select only cameras which have specific AI capabilities.



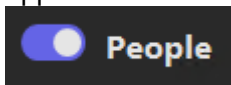
Cameras also can be selected from map. Select target maps then select camera icons or encircle cameras by dragging your mouse. The map is optional, setup is required prior to using this function.



When you register or change the map on VMS, terminate plug-in and start again.

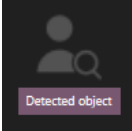
B. People filter

With the People filter enabled, only the thumbnails are shown which AI Camera with people detection app detected.



Also using filter panel, you can apply the search condition.



Features and controls	Description
	Uploading people picture If picture is uploaded, features are automatically detected.
Gender	Male, Female
Age	Child (0~10), Young Adult (11~20), Adult (21~60), Senior (61+)
Hair type	Long-hair, Short-hair, Hat

Hair color	Black, Gray, White, Brown, Gold
Top type	Short-sleeves, Long-sleeves
Top color	Black, Gray, White, Brown, Orange, Yellow, Green, Blue, Purple, Pink, Red
Bottom type	Long, Short
Bottom color	Black, Gray, White, Brown, Orange, Yellow, Green, Blue, Purple, Pink, Red
Sunglasses	Sun Glasses, No Glasses
Beard	Beard, No Beard
Mask	Mask, No Mask
Bag	Bag, No Bag
Bag color	Black, White, Brown, Orange, Yellow, Green, Blue, Purple, Pink, Red
Shoes color	Black, White, Brown, Yellow, Green, Blue, Red
Moving Direction	Up, Up right, Right, Down right, Down, Down left, Left, Up left
Additional filters	Recognizable face can only show person thumbnails with clarify face. Color image only Note) Black & white images may show in the search results even if only Color image only is specified.
Threshold	There are Low, Average and High.
Exclude searched color	If this is selected, the color will exclude from search results.
Include similar color	If this selected, the color similar to the specified color will be automatically selected.

Note)

If the specified color does not appear in the search results, it may be displayed in the search results by selecting and searching for the following similar colors together.

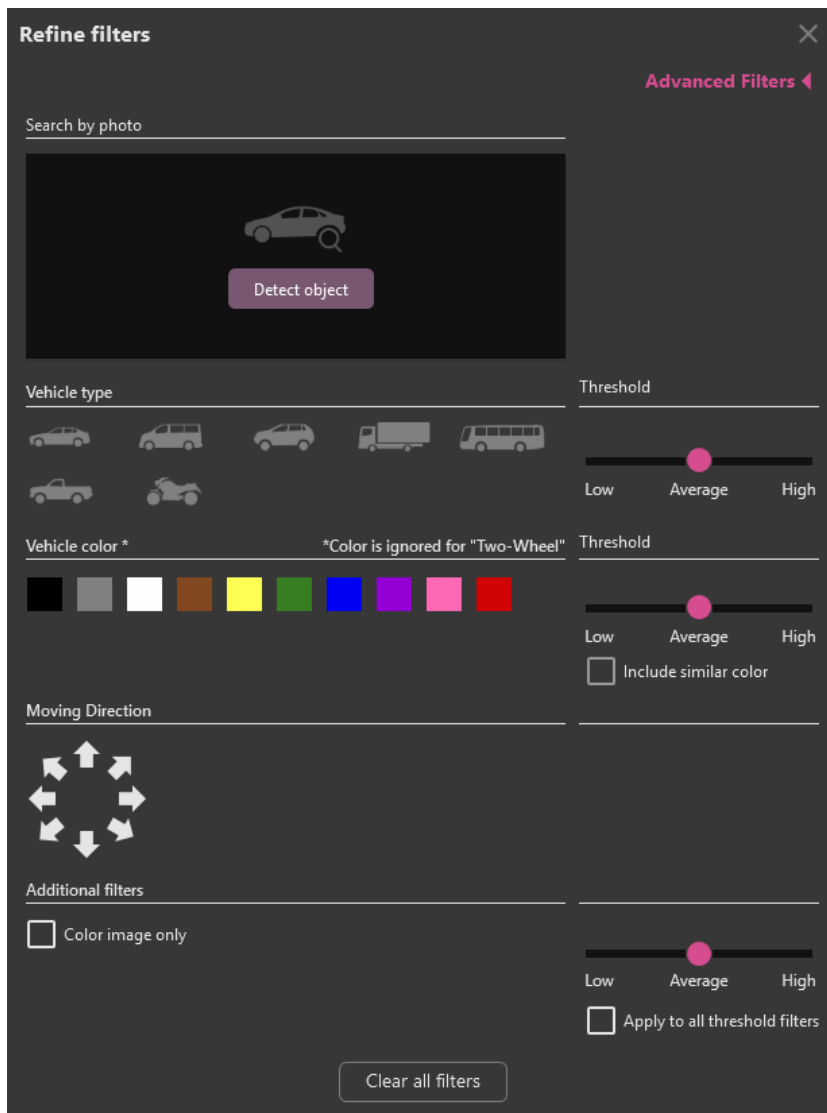
Color to be searched	Similar color (The order is similar from the left)
Black	Gray
Brown	White, Yellow, Orange
White	Gray, Blue, Brown, Yellow, Orange
Gray	Black, White, Blue
Green	Blue, Black, Yellow
Red	Orange, Pink
Blue	Green, Black, Purple
Yellow	Green, White, Brown, Orange
Orange	Red, Brown, Yellow
Purple	Pink, Blue, Black
Pink	Red, Purple

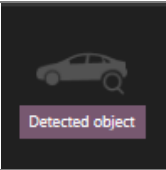
C. Vehicle filter

With the Vehicle filter enabled, only the thumbnails are shown which AI Camera with vehicle detection app detected.



Also using filter panel, you can apply the search condition.



Features and controls	Description
	Uploading vehicle picture If picture is uploaded, features are automatically detected.
Type	Truck, Bus, SUV, Van, Sedan, Pickup Truck, Two-Wheel
Color	Black, Brown, White, Gray, Red, Blue, Yellow, Green, Purple, Pink
Moving Direction	Up, Up right, Right, Down right, Down, Down left, Left, Up left
Additional filters	Color image only Note) Black & white images may show in the search results even if only Color image only is specified.
Threshold	There are Low, Average and High.
Include similar color	If this selected, the color similar to the specified color will be automatically selected.

Note)

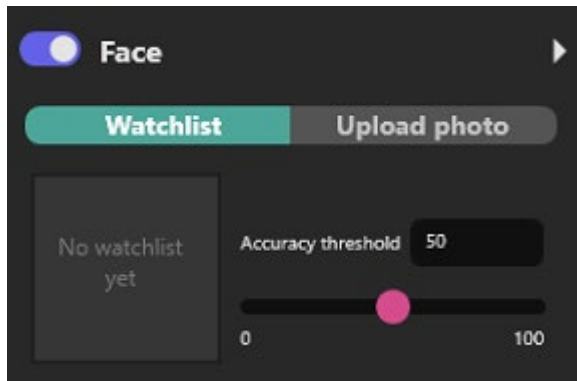
If the specified color does not appear in the search results, it may be displayed in the search results by selecting and searching for the following similar colors together.

Color to be searched	Similar color (The order is similar from the left)
Black	Gray
Brown	Gray, White
White	Gray, Blue, Brown, Yellow
Gray	Black, White, Blue
Green	Blue, Black, Yellow
Red	Pink
Blue	Green, Black, Purple
Yellow	Green, White, Brown
Purple	Pink, Blue, Black
Pink	Red, Purple

D. Face filter

With the Face filter enabled, only the thumbnails are shown which AI Camera with face detection app detected.

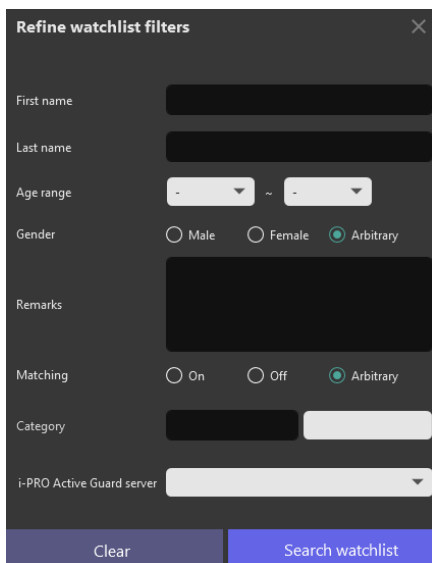
Also using filter panel, you can apply the search condition.



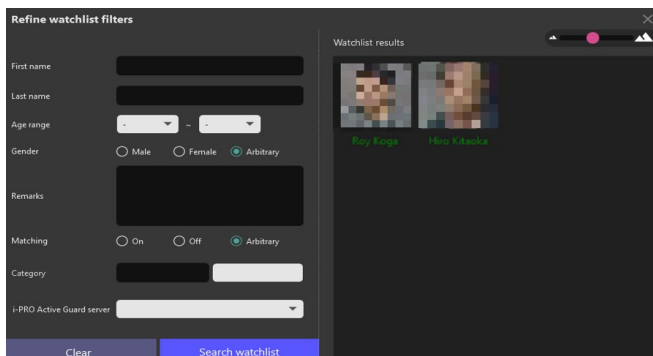
Watchlist

Select face from watchlist and search similar face.

Click [Search watchlist] with search conditions.



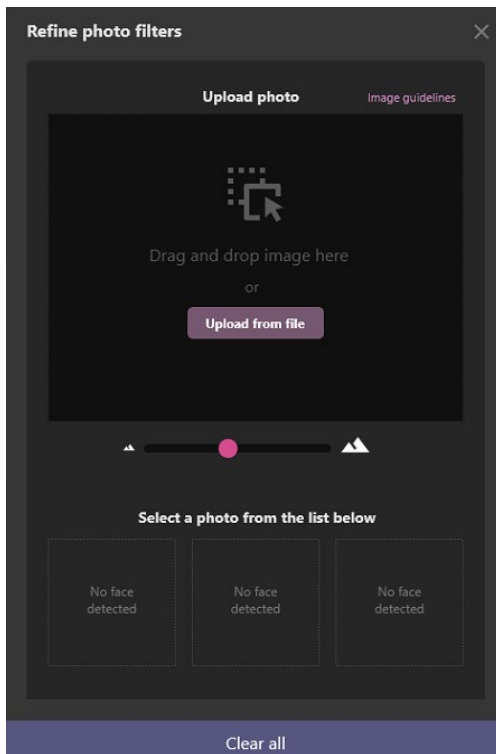
Select face from search result.



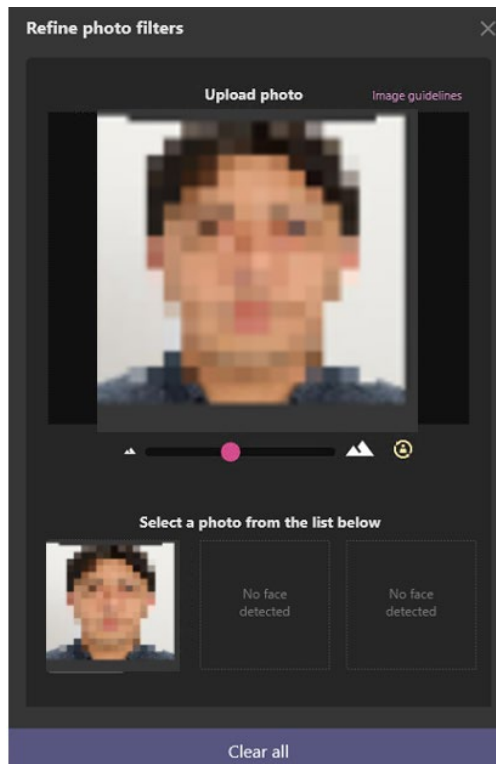
Upload photo

Upload image file that includes face and search similar faces.

Click icon or drag and drop the image file.

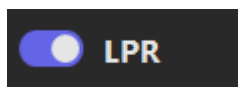


When face is detected from the image, select face and click OK.

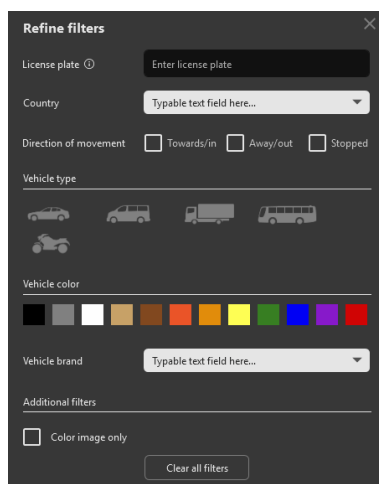


E. LPR Filter

With the LPR filter enabled, only the thumbnails are shown which license plate detection app detected.



Also using filter panel, you can apply the search condition.



Features and controls	Description
License plate	Specify a License plate number. Note) Use '%' for wild card search (example: for plates starting with 'A,' enter 'A%.')
Country	Specify the country
State *1	Specify the state
Moving Direction	Towards/in, Away/out, Stopped
Type	Car, Van, Truck, Bus, Motorcycle
Color	Black, Gray, White, Beige, Brown, Orange, Golden, Yellow, Green, Blue, Purple, Red
Brand	Specify the Brand
Model *2	Specify the model
Additional filters	Color image only Note) Black & white images may show in the search results even if only Color image only is specified.

*1 : State is displayed when Country is set to "United States."

*2 : Model is displayed after setting Brand.

Note:

- LPR setting items differ between V1.60 or earlier and V1.70 or later. If upgrade to V1.70 or later, the previous functions will no longer be available.

2.2.1.3. About thumbnail detail pane

Selecting one of thumbnail search results, you can take various actions such as playback video, check analysis result and register the thumbnail to watchlist and so on. The additional information about playback controls, please refer to 2.4 PLAYBACK VIDEO CONTROL.



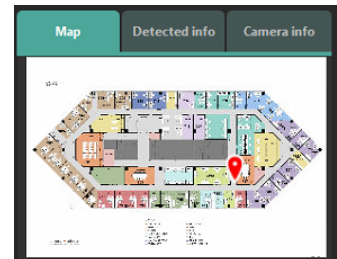
- **Information**

You can see more detailed information such as detected place, the analysis information, and camera information.

A. **Map**

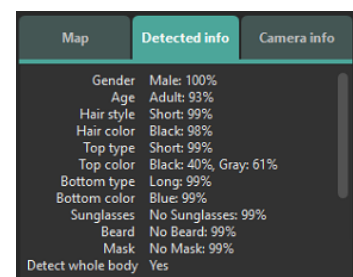
The camera which sent the thumbnail is displayed with map. You can see the camera location on map.

When you register or change the map on VMS, terminate plug-in and start again.



B. **Detected info**

Analysis score information for each feature is displayed.



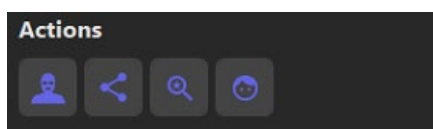
C. Camera info

Camera information is displayed.

Map	Detected info	Camera info
	Manufacturer	Panasonic
	Model	Panasonic WV-S2236L
	IPAddress	192.168.0.31
	Camera name	Corridor3
	Server	Dev Meeting
	CameraID	157441743
	WebAccess	192.168.0.31

- Action buttons

This allows user quick operation such as search for similar characteristics by one click, register watchlists, and sharing other devices.



A. Search for similar characteristics

Quick search is provided to allow for an instant search to detect high score features, which is available for person or vehicle thumbnails.

Search for exactly similar characteristics (less false result)

Selectable when upper body in people image is recognized.

Search for similar images by searching for cameras that AI People detection is installed.

Search for exactly similar characteristics (less missing result)

In case of people, selectable when whole body in people image is recognized.

Search for similar images by searching for cameras that AI People detection is installed.

This is also applied for vehicle images.

Search for similar images by searching for cameras that AI Vehicle detection is installed.

Search for similar face

Selectable when face in people images is recognized.

This is also applied for face image.

Search for similar images by searching for cameras that AI Face detection is installed.

Search for license plate number


Selectable when license plate number in LPR image is recognized.

Search for similar images by searching for cameras that AI License plate detection is installed.

If you want to go back to previous search results, use Latest search condition in Saved filters.

Note:

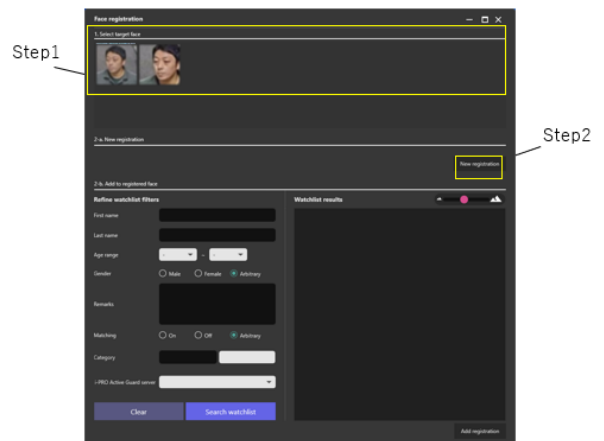
- Similar Search is not applied the Latest search condition in Saved filters.
-

B.  Save facial features to Registered facial detection

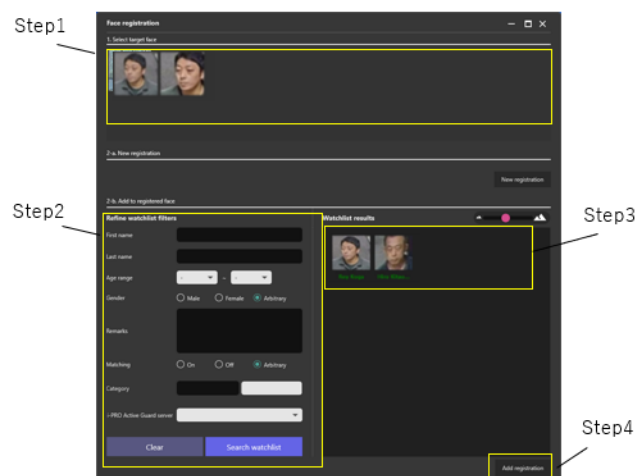
Register face image to watchlist. There are options either register detected face newly or add detected face to existing registered face.

In case of register as new face:

- Step1.** Select one of detected faces.
- Step2.** Click New registration button.
- Step3.** Please follow to 2.5.1. *Face Watchlist (Step2)*


**In case of adding to existing registered face:**

- Step 1.** Select one of detected faces.
- Step 2.** Search existing registered faces by using filters. If not specify any filters, all registered faces are displayed.
- Step 3.** Select one of searched faces.
- Step 4.** Click Add registration button.
- Step 5.** Please follow to 2.5.1. *Face Watchlist (Step2)*



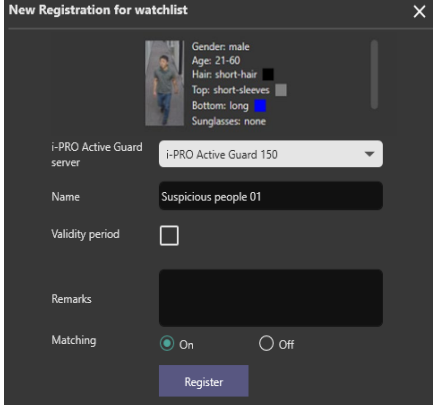
Note:

- Face can be registered up to 1,000.
 - Recommended with of face for registration is more than 75 pixel. When the selected face is under the value, message is shown.
-


C.  Save person's characteristics to Registered Person detection


Register personal features to watchlist. High score items are registered.

Some basic information can be entered from here.

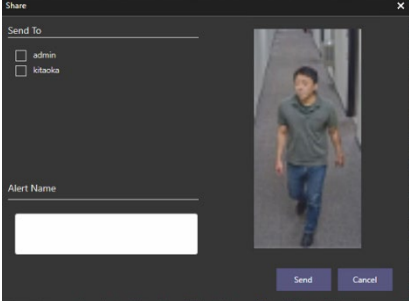


The dialog box 'New Registration for watchlist' contains the following fields and options:


- Thumbnail: 
- Gender: male
- Age: 21-60
- Hair: short-hair
- Top: short-sleeves
- Bottom: long
- Sunglasses: none
- i-PRO Active Guard server: i-PRO Active Guard 150
- Name: Suspicious people 01
- Validity period:
- Remarks:
- Matching: On Off
- Register button

D.  Share information

Share thumbnail to registered smart devices. To send thumbnail to smart devices, select one of devices then click OK.




The 'Share' dialog box contains the following elements:

- Send To: admin, ktacka
- Alert Name:
- Thumbnail: 
- Send and Cancel buttons

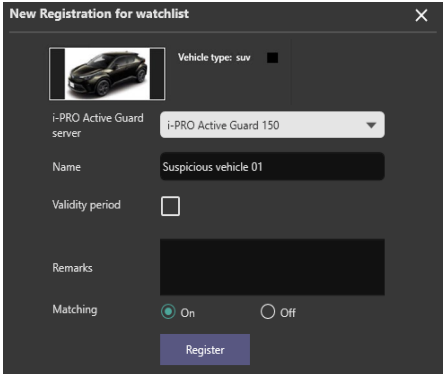
Note:

- To use this function, install VI Guard (Android/iOS application) to smart device.


E.  Save vehicle's characteristics to Registered Vehicle detection

Register vehicle features to watchlist. High score items are registered.

Some basic information can be entered from here.

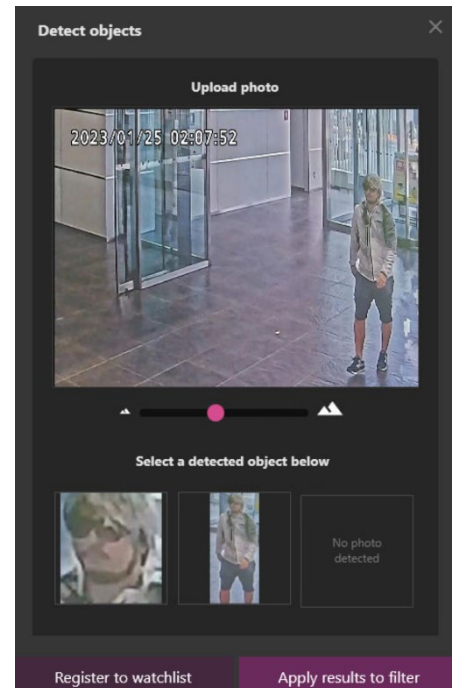


The dialog box 'New Registration for watchlist' contains the following fields and options:

- Thumbnail: 
- Vehicle type: suv
- i-PRO Active Guard server: i-PRO Active Guard 150
- Name: Suspicious vehicle 01
- Validity period:
- Remarks:
- Matching: On Off
- Register button

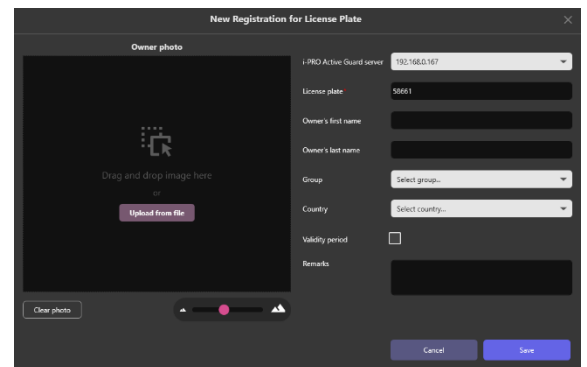
F.  Analysis

Detects faces, people, and vehicles from playback video. From the detected objects, you can register it to the watchlists or apply results to filter.










G.  Save license plate number to LPR detection

Register license plate, country, state are registered. Some basic information can be entered from here.



Action buttons can be utilized depending on type of objects.

	Search for similar characteristics 	Save facial features to Registered facial detection 	Save person's characteristics to Registered Person detection 	Share thumbnails to saved mobile phone number 	Save vehicle's characteristics to Registered vehicle detection 	Detecting objects from video 
Face filter	Yes	Yes	No	Yes	No	Yes
People filter	Yes	Yes	Yes	Yes	No	Yes
Vehicle filter	Yes	No	No	Yes	Yes	Yes
LPR filter	Yes	No	No	Yes	No	No

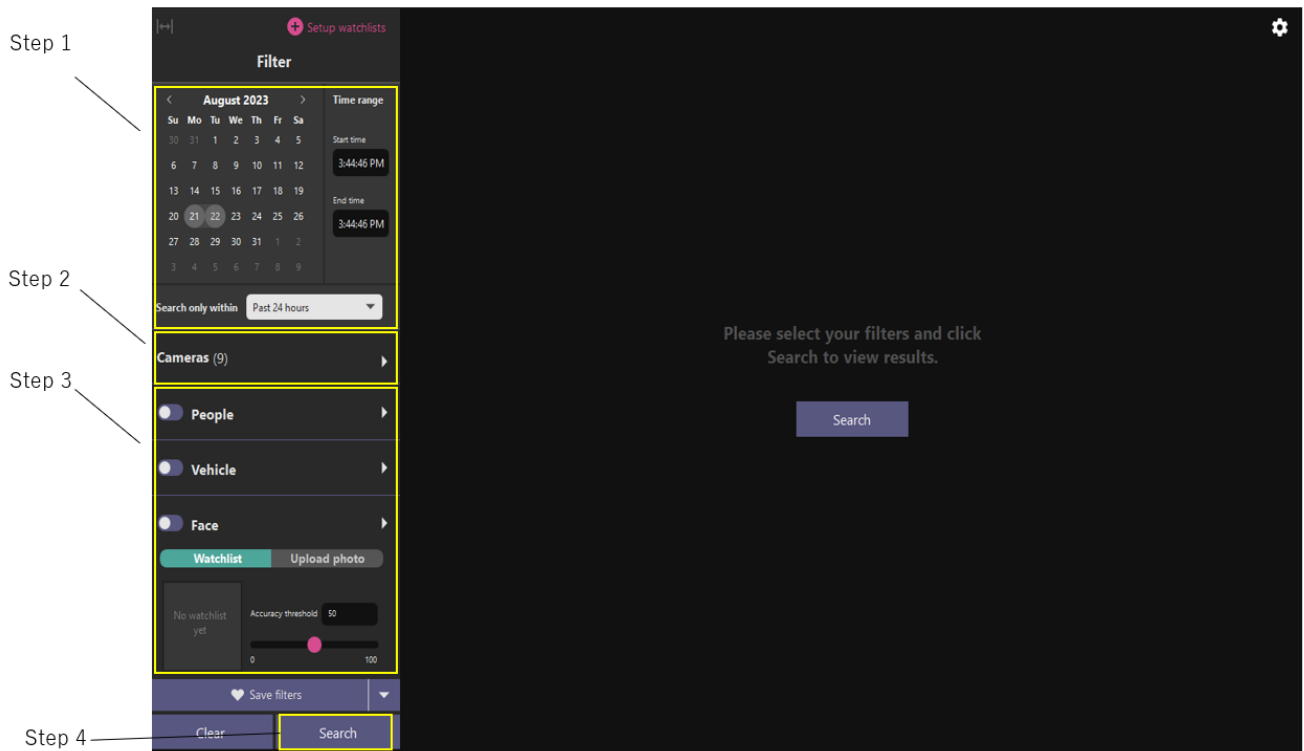
	Save license plate number to LPR detection *1 					
Face filter	No					
People filter	No					
Vehicle filter	No					
LPR filter	Yes					

*1 In case of the thumbnail doesn't have license plate number information, button does not display.

Ex) In i-PRO Active Guard Sever settings, [Configure System] - [Database] – [Storing data] “License plate number” is unchecked case.

2.2.2. Thumbnail search

The following steps provide basic operation for using the thumbnail search. The search filter can find objects that you want to find out from a lot of recorded thumbnails. Then you can take next action such as playback the video, save the picture, and register to watchlist, etc.



Step 1

Specify the start time and end time for search objects.

Step 2

Select AI Cameras. Select the Available Cameras option to search for a specific camera by name.

Step 3

Set up search filters. If no filters are selected, all objects detected by AI Cameras will be displayed.

Step 4

Click "Search."

2.3. MONITOR VARIOUS EVENTS

Using i-PRO Active Guard Event, you can watch what events occurred in the real time and also can find past events whatever you want to search.

2.3.1. UI Component

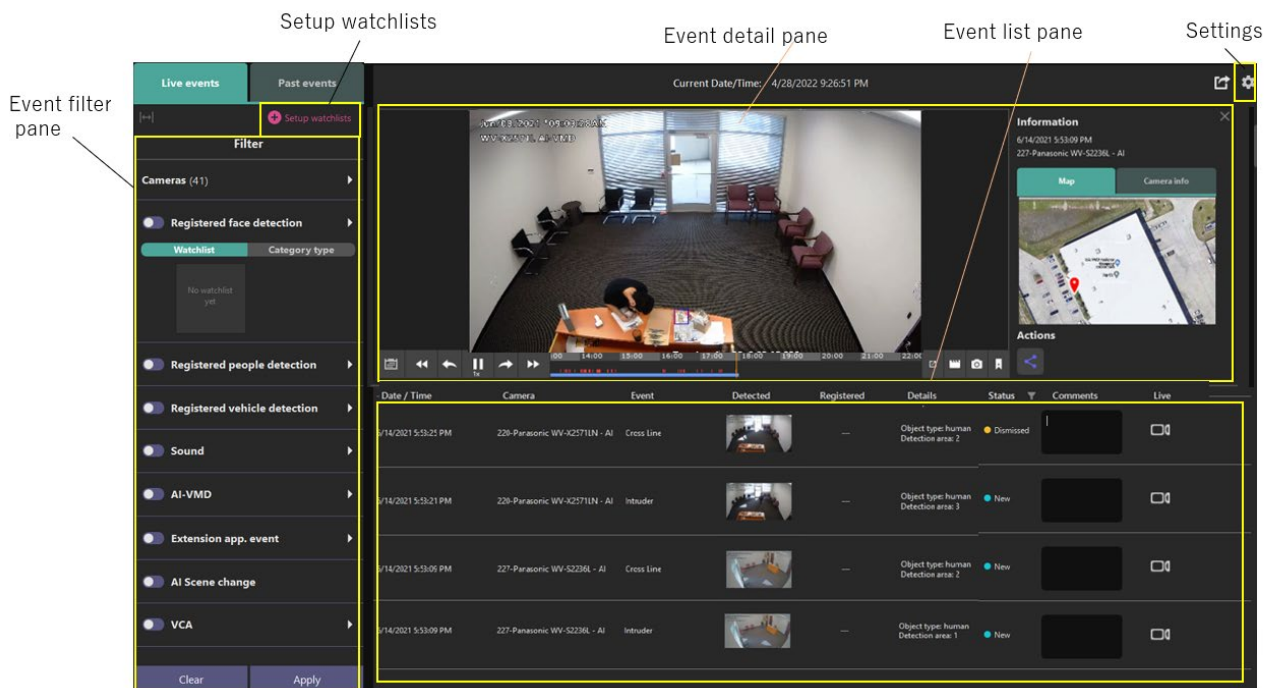
i-PRO Active Guard Event as two tabs that are Live events tab and Past events tab.

2.3.1.1. Overview

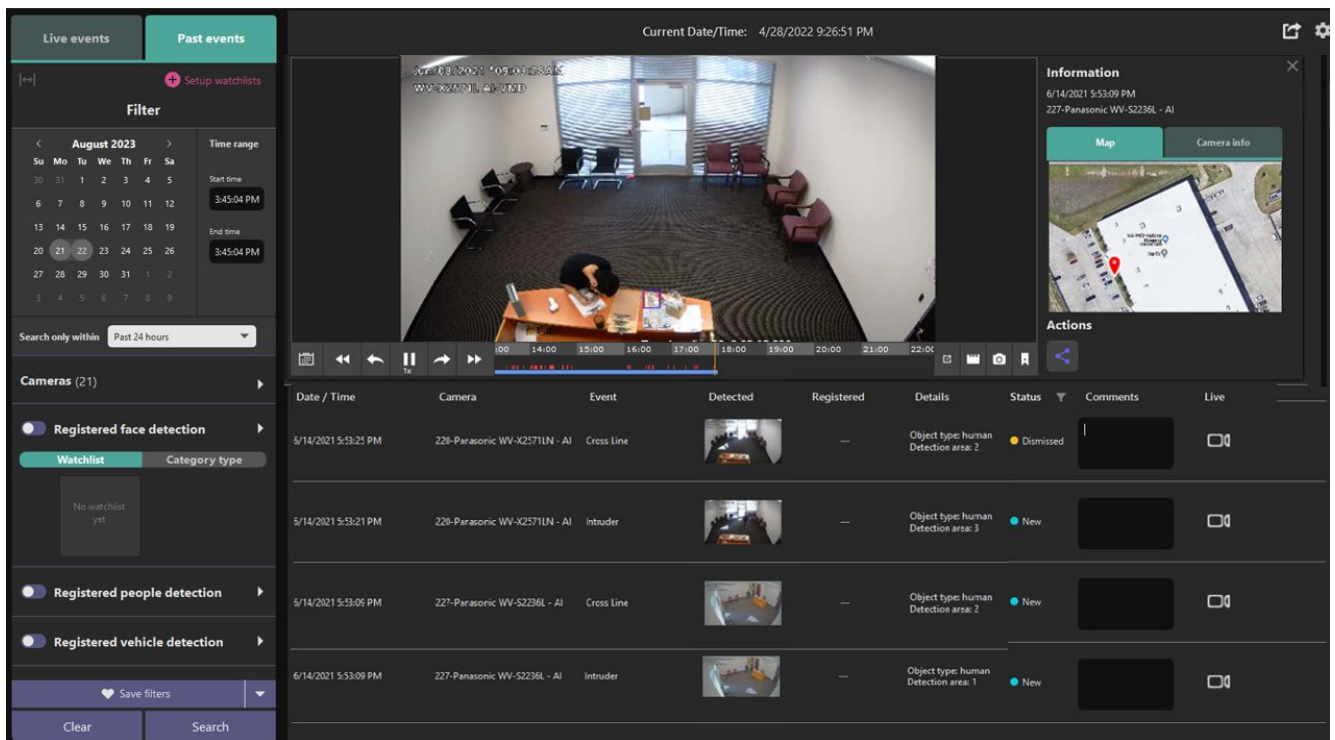
Live events tab and Past events tab are made from almost same UI components.

In this section, it describes the elements that compose the Live events tab and Past events tab.

Each tab is composed 4 main parts such as event filter pane, event list pane, event detail pane and settings.



Live events tab



Past events tab

Event filter pane	Switch tab (Live/Past events tab)	Switch views between monitoring events mode or search events in the past mode.
	Date/Time (Past events tab)	Start time and end time for search objects. This is used for only Past events tab.
	Search only within (Past events tab)	Select from Past 24 hours/Past week/Past month/None. - When select other than None, Date/Time filter are ignored. - When specify Date/Time filter, this setting will automatically become None.
	Cameras (Live/Past events tab)	Specify AI Cameras displaying events.
	Registered Face detection (Live/Past events tab)	Show face matching events.
	Registered People detection (Live/Past events tab)	Show personal features matching events.
	Registered Vehicle detection (Live/Past events tab)	Show vehicle features matching events.
	AI-VMD (Live/Past events tab)	Show AI VMD detection events.
	Sound (Live/Past events tab)	Show sound detection events.
	VCA (Live/Past events tab)	Show Video Content Analytics (VCA) events.
	Access Control (Live/Past events tab)	Show access control door events.
	AI Scene change (Live/Past events tab)	Show AI Scene change detection events.

	LPR (Live/Past events tab)	Show below events. *1 - License plate detection events. - Registered license plate detection events. - Unregistered license plate detection events. - Registered advanced vehicle detection events.
	Save filters (Past events tab)	Save filter settings with name up to 12.
	Clear	Clear filter settings.
	Apply	Activate filter settings.
Events list pane	<hr/> <p>Note:</p> <ul style="list-style-type: none"> • In Live events tab, while opening this view, the list is automatically updated if any event happens. • In Past events tab, the results of search from recorded events are listed. <hr/>	
	Current Date/Time (Live events tab)	Current date and time which is setting on PC.
	Export (Live/Past events tab)	Export event list as CSV or HTML.
	Date/Time column (Live/Past events tab)	Detected date and time which is setup at camera.
	Camera column (Live/Past events tab)	Camera name.
	Event column (Live/Past events tab)	Event type.
	Detected column (Live/Past events tab)	Detected thumbnail which is captured by camera.
	Registered column (Live/Past events tab)	Registered images or names in watchlist. Registered column is only for matching event.
	Similarity column	Detected score.
	Details column (Live/Past events tab)	Object type, detected area, detected score, etc. Displayed information depends on event type.
	Status column (Live/Past events tab)	Status for each event. New(Default)/Viewed/Dismissed Status can be changed by right click. You can select multiple events using "ctrl" or "shift." Up to 50 events can be changed at the same time.
	Comments column (Live/Past events tab)	Any comment up to 64 character can be input.
	Live column (Live/Past events tab)	Open live camera window.
	Detected thumbnail (Live/Past events tab)	Click and open event detail pane. Right click and save the thumbnail as picture or video clip.
	Result count (Past events tab)	Show the events search results count.
	Load More (Past events tab)	Load next 100 events.
Event detail pane	Thumbnail detail pane (Live/Past events tab)	Video control pane, information such as camera location, analysis score and camera information.
Set up	Face watchlist	Setup face watchlist.

watchlists	(Live/Past events tab)	
	People watchlist	Setup people watchlist.
	(Live/Past events tab)	
	Vehicle watchlist	Setup vehicle watchlist.
	(Live/Past events tab)	
	LPR watchlist	Setup lpr watchlist.
Settings	(Live/Past events tab)	
	Preferences	Setup some environments about playback, event monitor etc.
	Attribute Settings	Setup visibility of attributes in filter and watchlist.

*1 LPR events summary

- License plate detection

Notifies all detected license plates received by the i-PRO Active Guard server.

Set "Notify all detected license plates" on the screen of "Register VMS" is required.

- Registered license plate detection

Notification when the license plate number registered in the lpr watch list matches.

The following settings are required on "LPR watchlist setup."

- Set "Detect by vehicle appearance only" to "Off."

- Set "Trigger" to "When license plates in the selected group was detected".

- Unregistered license plate detection

Notification when the license plate number unregistered in the lpr watch list detected.

The following settings are required on "LPR watchlist setup."

- Set "Detect by vehicle appearance only" to "Off."

- Set "Trigger" is set to "When other than license plates in the selected group was detected".

- Registered advanced vehicle detection

Notification when the vehicle appearance in the lpr watch list matches.

The following settings are required on "LPR watchlist setup."

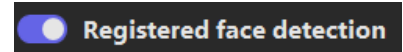
- Set "Detect by vehicle appearance only" to "On."

2.3.1.2. About Event filter

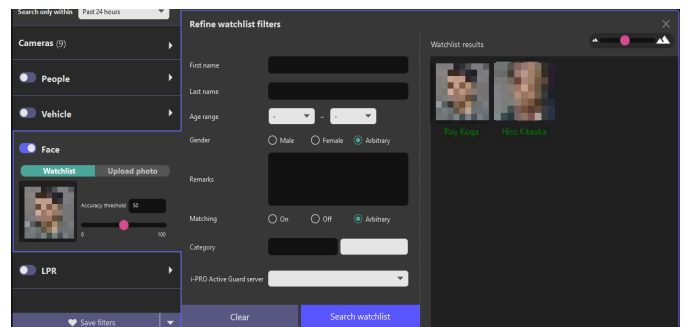
In this section, it describes about each events filter. For more information about the Camera filter, please refer to 2.2.1.2.

A. Registered Face detection

Being this filter enabled, the matching faces with Face watchlist are shown.

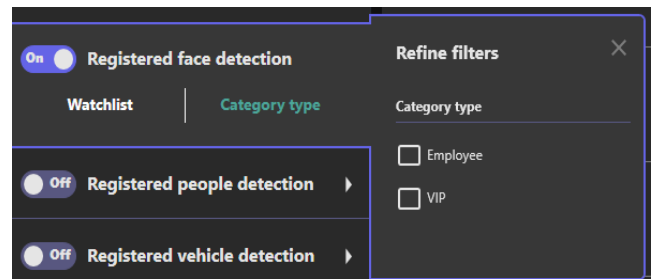


If you want to display a specific face, you can use Watchlist filter. Search registered faces by specifying search conditions then select one of results.



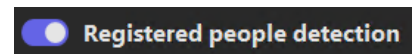
If you want to clear after setting, right click on the face image in the left panel then select Clear.

It is also possible to display by category registered in Watchlist.

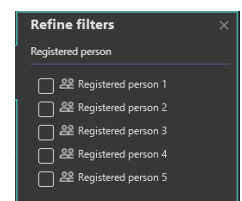


B. Registered People detection

With this filter enabled, all the matching people with People watchlist are shown.

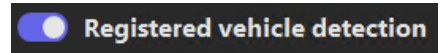


Also using filter panel, you can select specific registered items from people watchlist

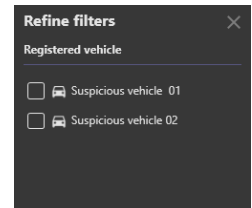


C. Registered Vehicle detection

With this filter enabled, all the matching vehicle with vehicle watchlist are shown.

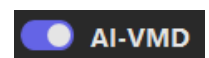


Also using filter panel, you can select specific registered items from vehicle watchlist



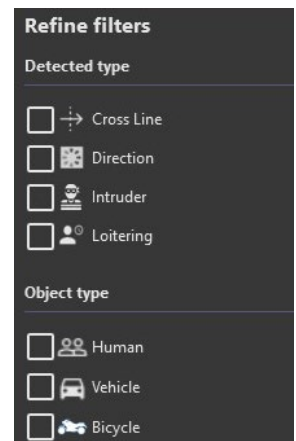
D. AI-VMD

With this filter enabled, all the detected AI-VMD events are shown.



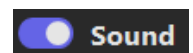
Also using filter panel, you can select specific Detected type and Object type to show.

By using On-site Learning application, you can increase any Object type. Please refer to the manual for details about On-site Learning application.

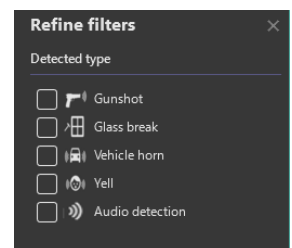


E. Sound

With this filter enabled, all the detected sound events are shown.

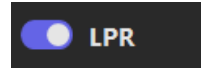


Also using filter panel, you can select specific sound events to show.



F. LPR

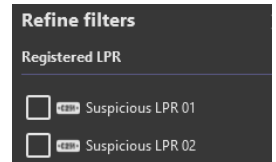
With this filter enabled, all the matching License plate with LPR watchlist and all detected license plates are shown.



i-PRO Active Guard Server configuration is required to display all detected license plates see "i-PRO Active Guard Setup Instructions"

- 4.3.6 Notification to VMS Server(optional)

Also using filter panel, you can select specific registered items from LPR watchlist

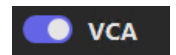


Note:

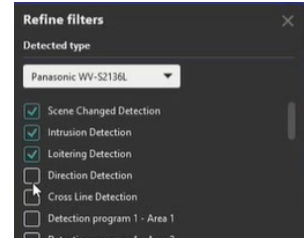
- LPR setting items differ between V1.60 or earlier and V1.70 or later. If upgrade to V1.70 or later, the previous functions will no longer be available.

G. VCA

With this filter enabled, all the VCA events are shown.

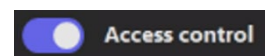


Also using the filter panel, you can select a specific camera, then the analytics available to that camera model.

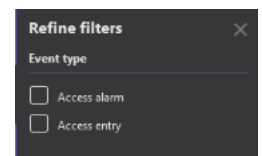


H. Access Control

With this filter enabled, all door Access Control events are shown.

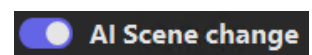


Also using the filter panel, you can select between Access alarms and door Access entry.



I. AI Scene change

With this filter enabled, all the detected scene change detection events are shown.










2.3.1.3. About event detail pane

By selecting one of the events from the list, you can take various actions such as playback video, open live camera, and register the thumbnail to watchlist and so on. Please refer to the section of 2.2.1.3. About thumbnail detail pane regarding of each function.

Details for playback control, please refer to 2.4. PLAYBACK VIDEO CONTROL.

Action buttons can be utilized depending on type of events.

	Search for similar characteristics 	Save facial features to Registered facial detection 	Save person's characteristics to Registered Person detection 	Share thumbnails to saved mobile phone number 	Save vehicle's characteristics to Registered vehicle detection 	Save license plate number to LPR detection *1 	Detecting objects from video 
Registered face detection filter	Yes	Yes	No	Yes	No	No	Yes
Registered people detection filter	Yes	No	No	Yes	No	No	Yes
Registered vehicle detection filter	Yes	No	No	Yes	No	No	Yes
AI-VMD	No	No	No	Yes	No	No	Yes
Sound	No	No	No	Yes	No	No	Yes
LPR	No	No	No	Yes	No	Yes	Yes
VCA	No	No	No	Yes	No	No	Yes
Access Control	No	No	No	Yes	No	No	Yes
AI Scene change	No	No	No	Yes	No	No	Yes

*1 In case of the thumbnail doesn't have license plate number information, button does not display.

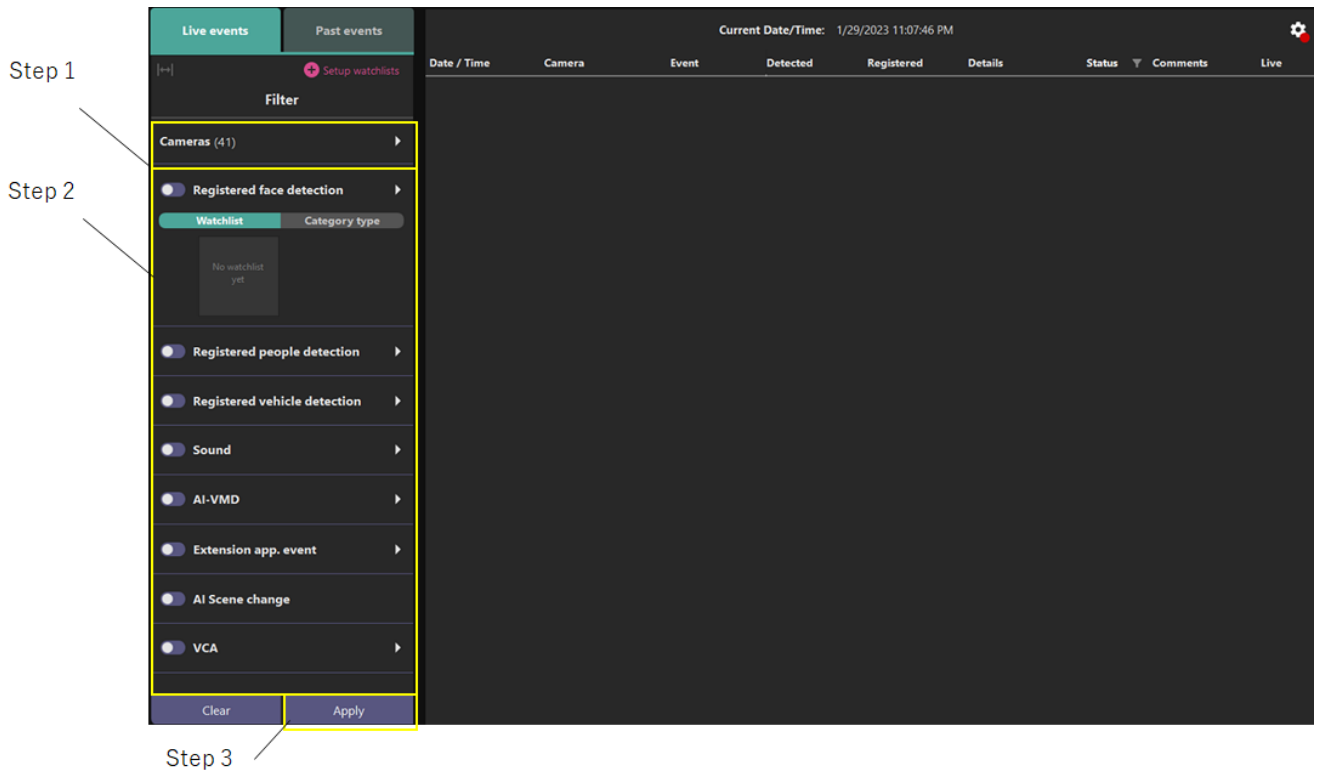
Ex) In i-PRO Active Guard Sever settings, [Configure System] - [Database] - [Storing data] "License plate number" is unchecked case.

Information pane can be utilized depending on type of events.

	Map	Detected info (Only Past event)	Camera info
Registered face detection filter	Yes	Yes	Yes
Registered people detection filter	Yes	Yes	Yes
Registered vehicle detection filter	Yes	Yes	Yes
AI-VMD	Yes	No	Yes
Sound	Yes	No	Yes
LPR	Yes	Yes	Yes
VCA	Yes	No	Yes
Access Control	Yes	No	Yes
AI Scene change	Yes	No	Yes

2.3.2. Monitor live events

The following steps provide basic operations for monitoring events basic operations for monitor events.



Step 1

All cameras are selected as default. If you want to specify cameras, you can use camera filter.

Step 2

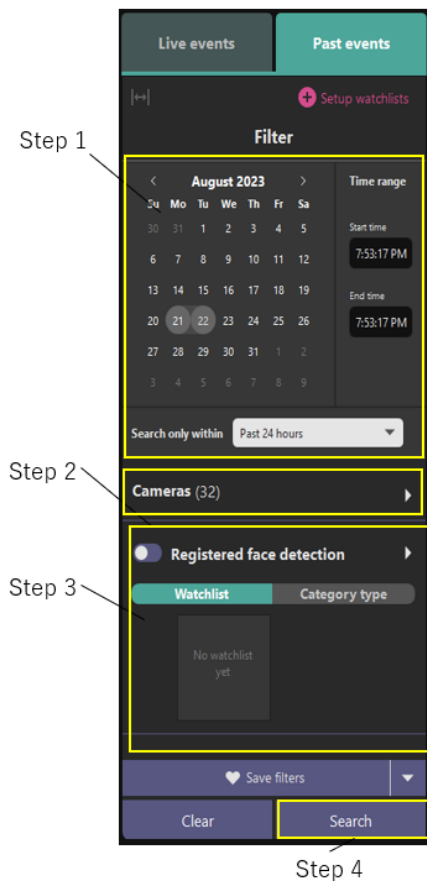
Set up event filters. You can specify type of event by using event filters.
Not using any filters displays all detected events.

Step 3

Click Apply.

2.3.3. Search past events

The following steps provide basic operations for searching past events.



Step 1

Specify the start time and end time.

Step 2

Select AI Cameras. All AI Cameras are selected as default.

Step 3

Set up search filters. If no filters are selected, all objects detected by AI Cameras will be displayed. Available search filters include:

- Registered face detection
- Registered people detection
- Registered vehicle detection
- AI-VMD
- Sound
- LPR
- VCA
- Access Control
- AI Scene change

Step 4

Click Search. Results are displayed as shown below.

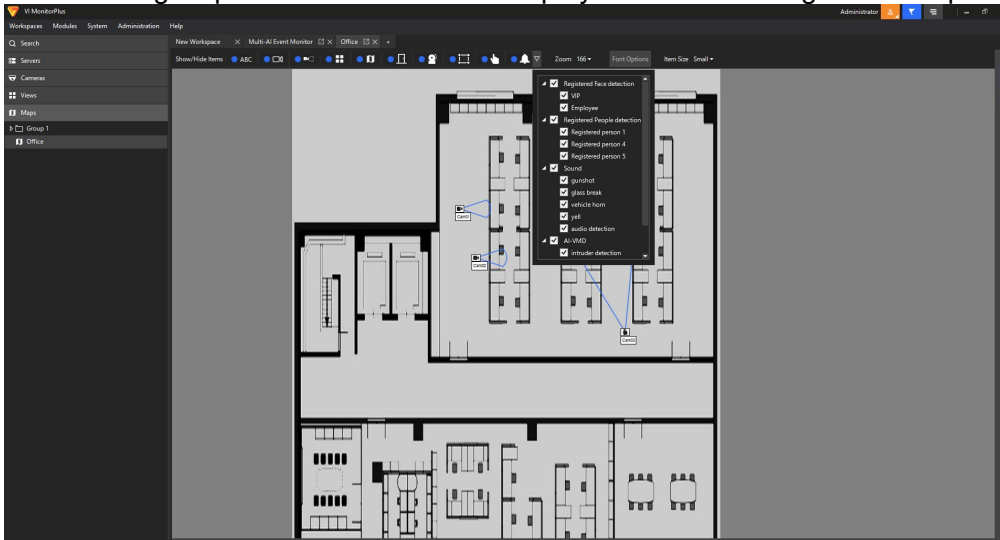
Date / Time	Camera	Event	Detected	Registered	Details	Status	Comments	Live
1/29/2023 11:05:31 PM	192.168.0.55 - Panasonic WV-S2136L	Cross Line		—	Object type: Vehicle Detection area: 2 Detected score: N/A	New		
1/29/2023 11:03:19 PM	192.168.0.55 - Panasonic WV-S2136L	Cross Line		—	Object type: Vehicle Detection area: 2 Detected score: N/A	New		
1/29/2023 11:01:50 PM	192.168.0.55 - Panasonic WV-S2136L	Cross Line		—	Object type: Vehicle Detection area: 2 Detected score: N/A	New		
1/29/2023 11:01:05 PM	192.168.0.55 - Panasonic WV-S2136L	Cross Line		—	Object type: Vehicle Detection area: 2 Detected score: N/A	New		
1/29/2023 11:00:54 PM	192.168.0.55 - Panasonic WV-S2136L	Cross Line		—	Object type: Vehicle Detection area: 2 Detected score: N/A	New		
1/29/2023 11:00:16 PM	192.168.0.55 - Panasonic WV-S2136L	Loitering		—	Object type: Vehicle Detection area: 1 Detected score: N/A	New		
1/29/2023 10:58:14 PM	192.168.0.55 - Panasonic WV-S2136L	Cross Line		—	Object type: Vehicle Detection area: 2 Detected score: N/A	New		

Load More
100 of 255 results

2.3.4. Overlay events on VMS map

Getting events can be overlay by using VI VMS Maps.

The following steps demonstrate how to display events on the registered map.



Step 1

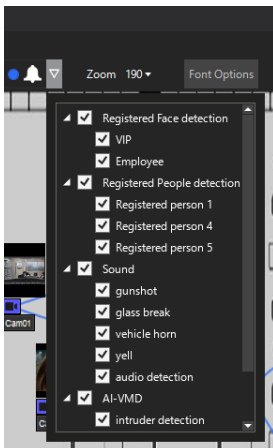
Navigate Maps and select registered map.

Step 2

Click AI Alarm icon then enable AI Alarm.

Step 3

Select events that you want to show.

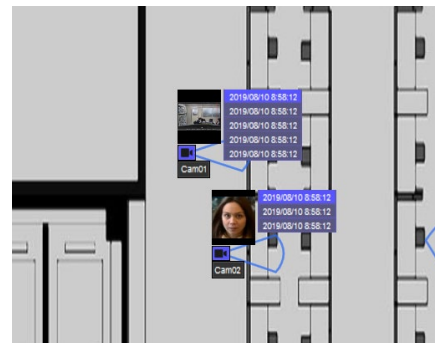


Step 4

If any events happen, it appears like below.

Events are listed up to five per camera from the most recent.

Live window opens by double click a list.



2.4. PLAYBACK VIDEO CONTROL

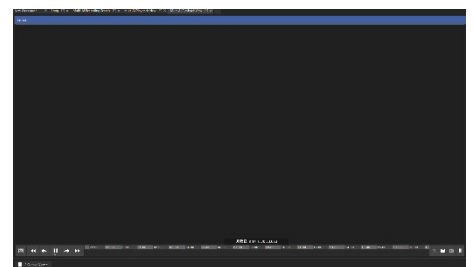
When viewing video on a thumbnail/event detail pane, the following a set of video controls appear.



The video operation controls are described below.

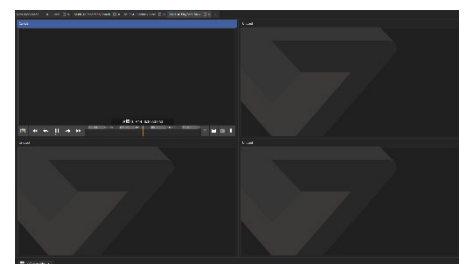
		In pause mode, forward and backward navigation through each frame on the timeline.
		Fast playback or fast rewind the video recording.
		Play or pause the video recording.
		In play mode, navigate previous and next motion events on the timeline.
		Open new workspace to playback video.
		Export video from selected the thumbnail.
		Take a snapshot and save as file or clipboard.
		Add video to bookmark or open bookmark manager.
		View in New Window

It displays 1 camera view and also can switch to 4 cameras view. To switch these views, select view mode from left at bottom menu.



In 4 cameras view mode, the left on the top view is fixed view as original. It can't be changed.

In the other views, you can drag and drop cameras from the cameras list on the left side panel. These views start video from the time of timestamp of original thumbnail.



2.5. SETTINGS

This section describes how to manage the watchlist and preferences.

To open these settings, click Set up watchlists button for Face watchlist, People watchlist, Vehicle watchlist, LPR watchlist, or click settings icon for Preferences or Attribute Settings.



2.5.1. Face Watchlist

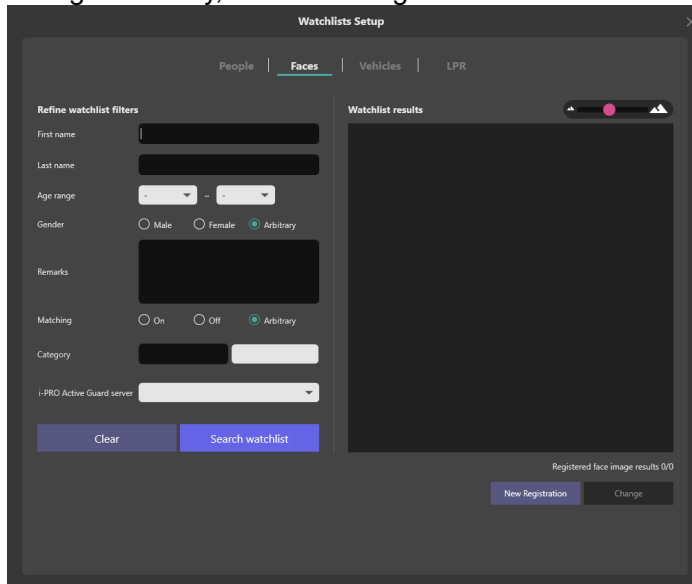
This section describes the operation of add, edit, and delete.

If you don't have a permission to access the watchlist or your camera configuration has no AI-Camera which installed face detection application, then this function is not available.

- **Add Registration**


Step 1

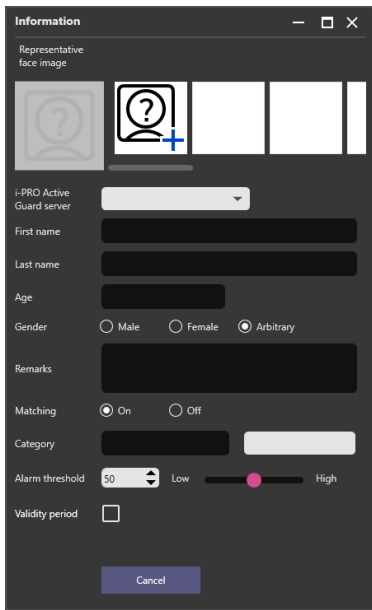
To register newly, click New Registration button.



Step 2

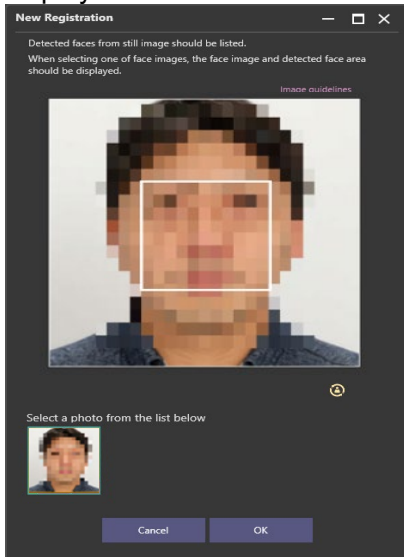
One face image must be registered at least.

Click  icon then select the file you want to use.

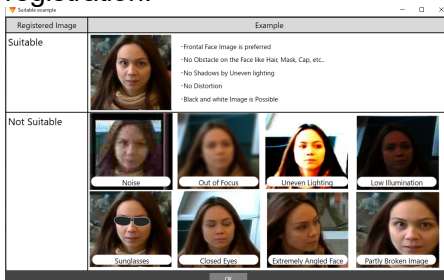


Step 3

Then analyzing will begin and the detected faces are displayed. If there are some people on the file, all detected faces are displayed. Select a face (yellow area in below) then white frame will be displayed around the detected face.



By pressing the “Image guidelines” button, you can see a sample of face image quality suitable for registration.



Recommended width of face for registration is more than 75 pixel. When the selected face is under the value, message is shown.

Step 4

Input other information then click Save. i-PRO Active Guard server and First Name or Last Name is required.

Information

Representative face image

i-PRO Active Guard server

First name

Last name

Age

Gender Male Female Arbitrary

Remarks

Matching On Off

Category

Alarm threshold 50 Low High

Validity period

Cancel

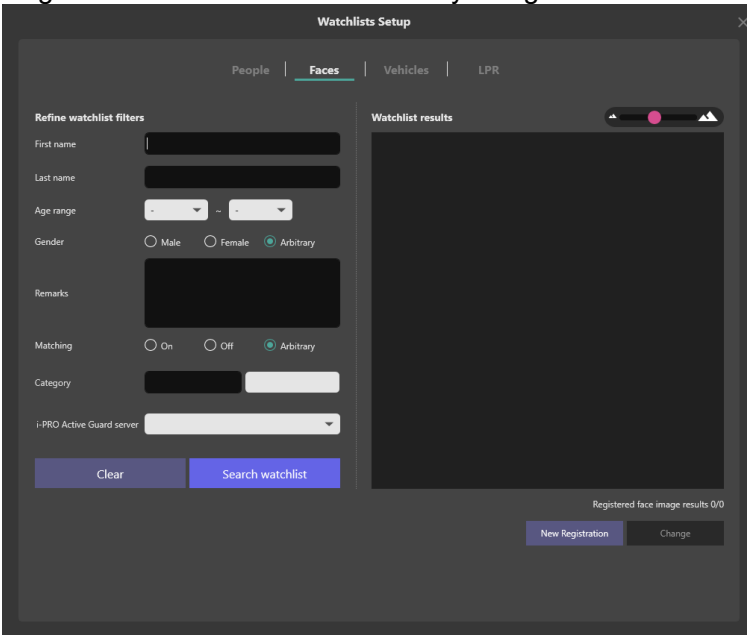
Note:

- The Matching enabled starts matching process.
 - The Alarm threshold low means missing faces will be decreased but false alarm may be increase. High means false alarm will be decreased but missing faces may be increased. It can be set for individual person. Please adjust according to your environment and registered face image.
 - In Validity Period, two expiration dates can be set.
Disable matching: After the expiration date, this person's face will not be detected.
Delete registration: After the expiration date, we will delete the registration itself of this person.
-

- **Edit Registration**

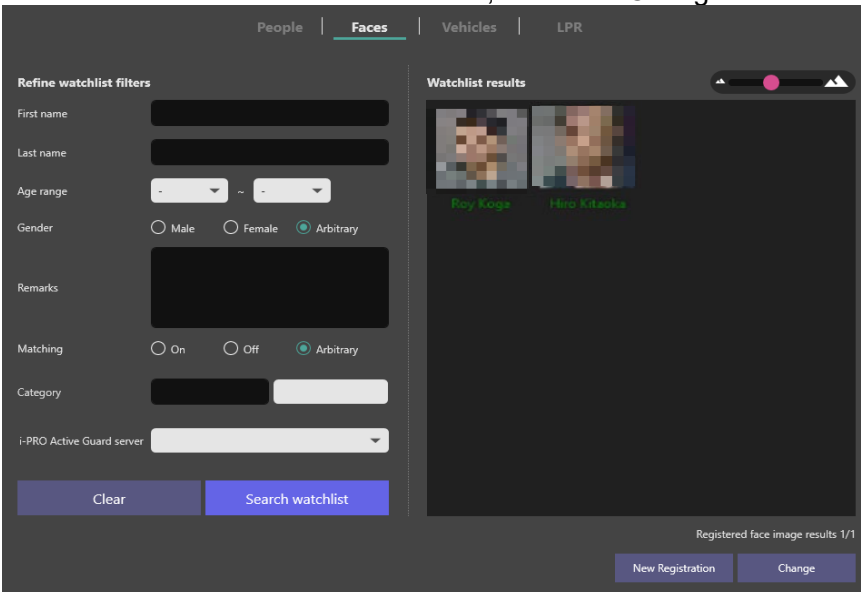
Step 1

First, find registered face you want to edit the information.
Registered faces can be searched by using filter.



Step 2

Select one of faces from search results, then click Change button.



Step 3

Edit any information then click Save.

Information

Representative face image

i-PRO Active Guard server

First name

Last name

Age

Gender Male Female Arbitrary

Remarks

Matching On Off

Category

Alarm threshold 50 Low High

Validity period

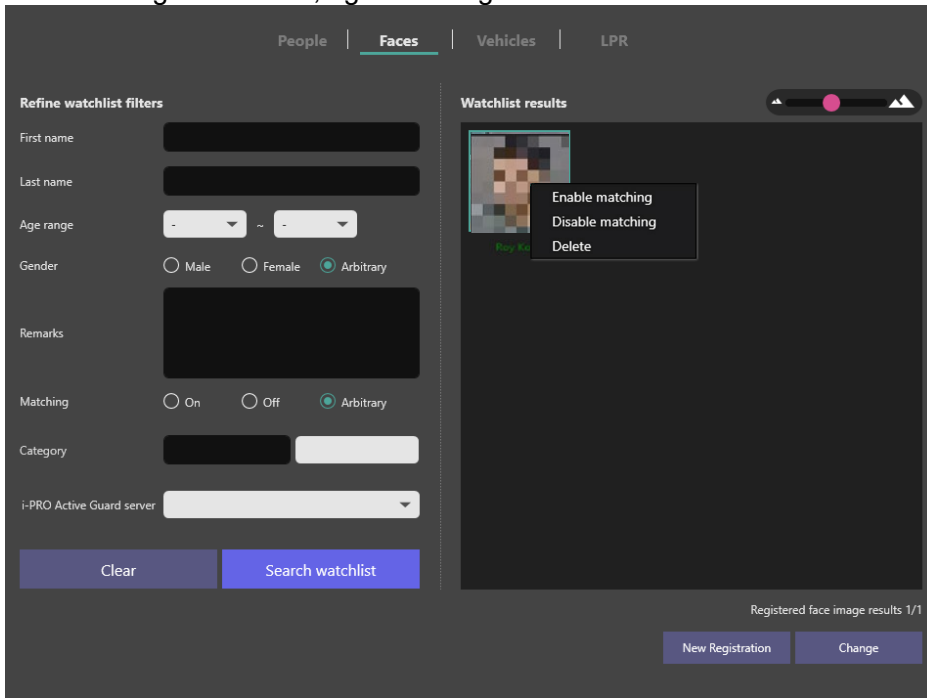
Cancel

Note:

- The Matching enabled starts matching process.
 - The Alarm threshold low means missing faces will be decreased but false alarm may be increase. High means false alarm will be decreased but missing faces may be increased. It can be set for individual person. Please adjust according to your environment and registered face image.
 - In Validity Period, two expiration dates can be set.
Disable matching: After the expiration date, this person's face will not be detected.
Delete registration: After the expiration date, we will delete the registration itself of this person.
-

- **Delete Registration**

To delete registered face, right click registered face then click Delete.



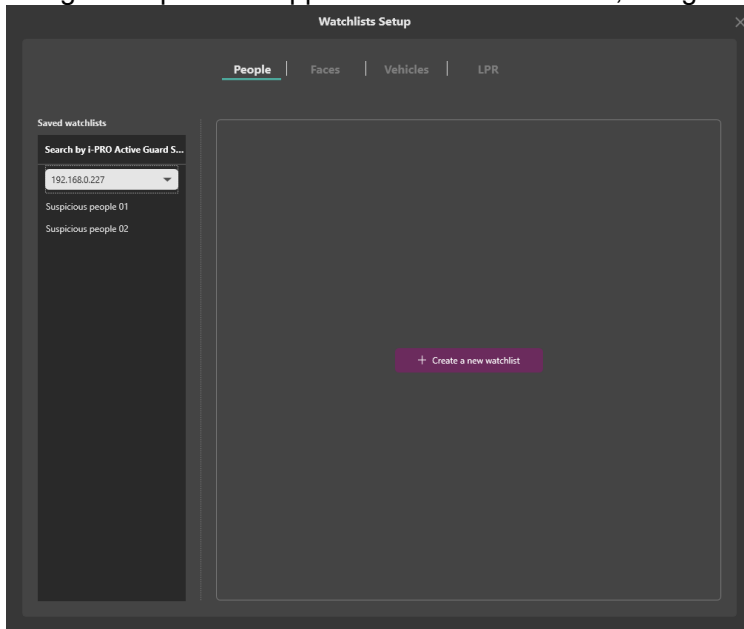
2.5.2. People Watchlist

This section describes the operation of add, edit, and delete.

If you don't have a permission to access the watchlist or your camera configuration has no AI-Camera which installed people detection application, then this function is not available.

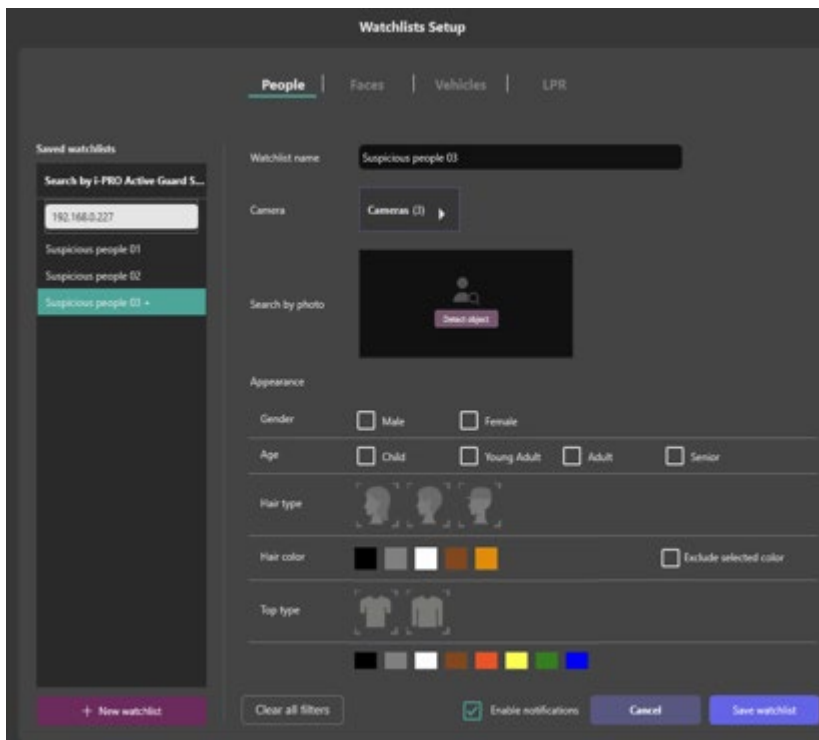
- **Add Registration(To manually select attributes)**

To register a person's appearance to the watchlist, navigate to Set up watchlists button > People tab.




Registered items are listed on the left side or it uploads the people picture.

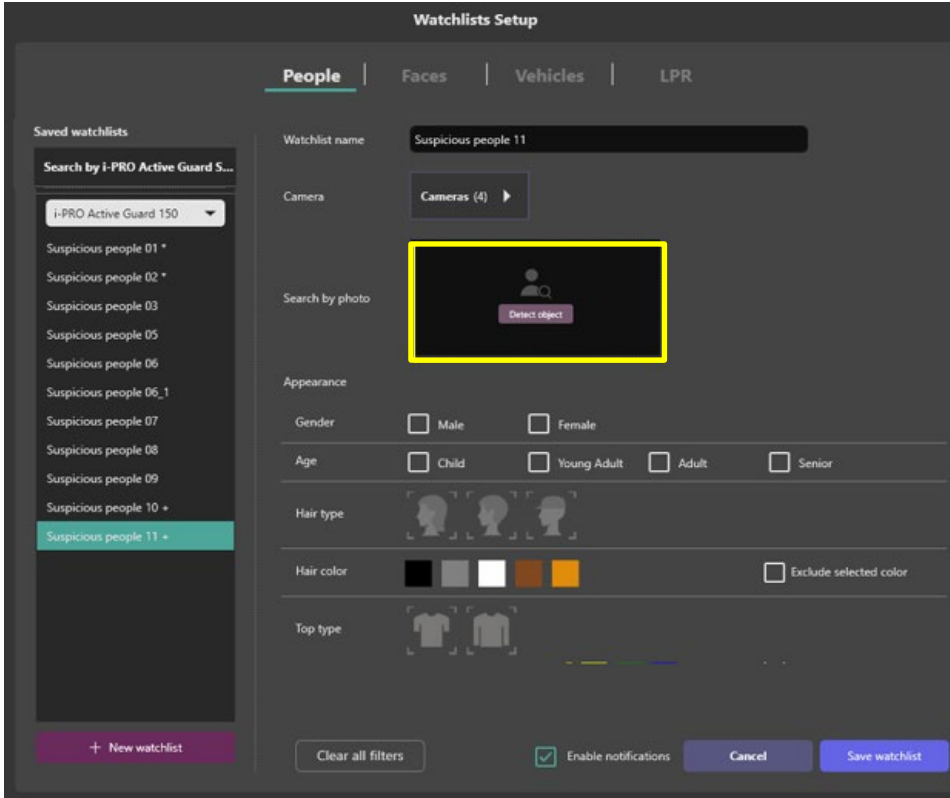
To add new item, click "+ Create a new watchlist" button then select appearance items.



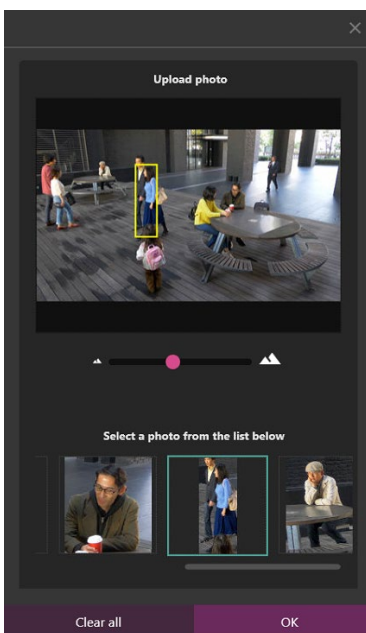
- **Add Registration(To select attributes from an image)**

This procedure automatically selects and registers attributes from an image.

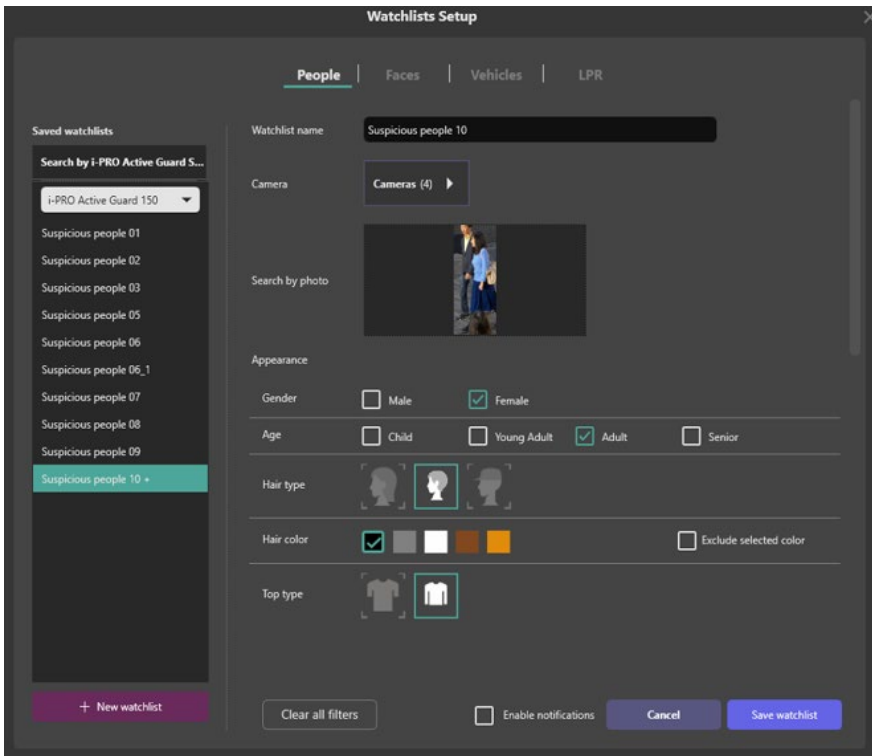
To select attributes from a people image, select the image to be registered from  icon.



Select the people you want to register from the detected list.



Make sure the attribute is automatically selected, and then click "Save".

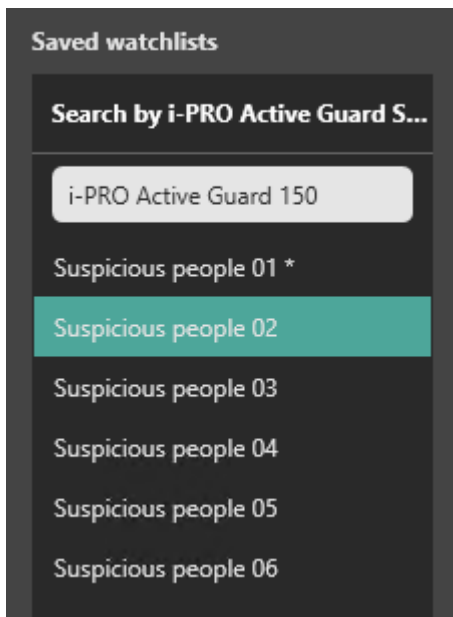


Note:

- Up to 12 people watchlist can be registered.
 - Basically, only one item can be selected from each category. This is because many items register would affect false positives.
Color specification except for bag color allows specifying multiple items.
 - In Validity Period, two expiration dates can be set.
Disable matching: After the expiration date, this person's face will not be detected.
Delete registration: After the expiration date, we will delete the registration itself of this person.
 - It is impossible to register to multiple i-PRO Active Guard server at the same time.
-

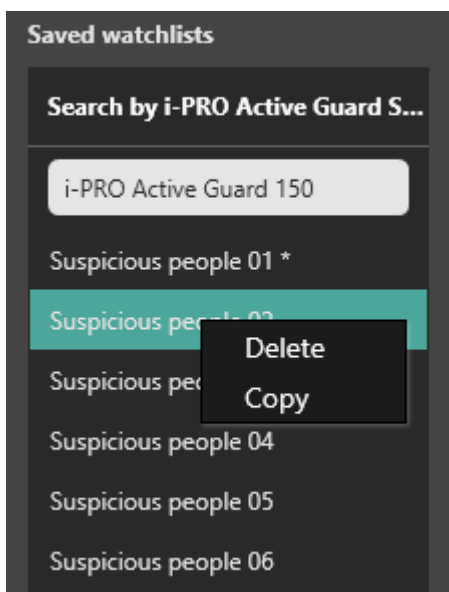
- **Edit Registration**

To edit a registered person's appearance, select one of registered item then change selected appearance item.



- **Delete Registration**

To delete a registered person's appearance, right click one of registered item.



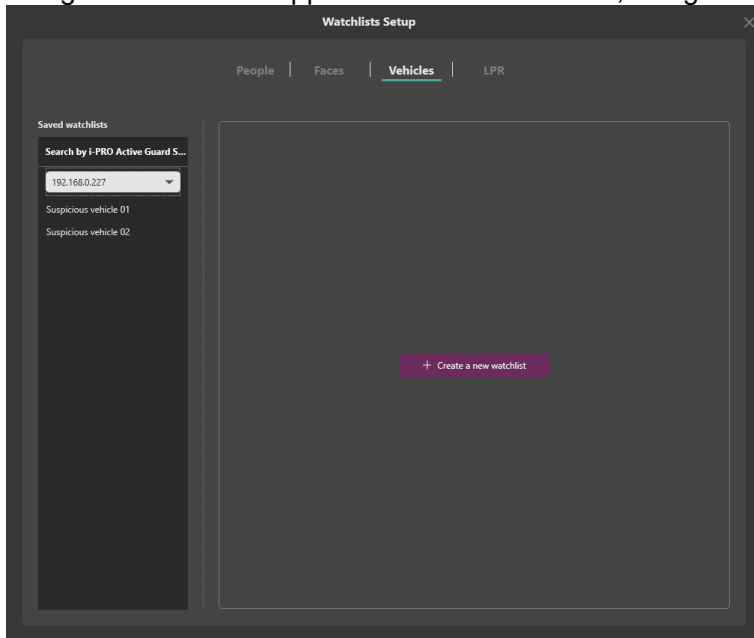
2.5.3. Vehicle Watchlist

This section describes the operation of add, edit, and delete.

If you don't have a permission to access the watchlist or your camera configuration has no AI-Camera which installed vehicle detection application, then this function is not available.

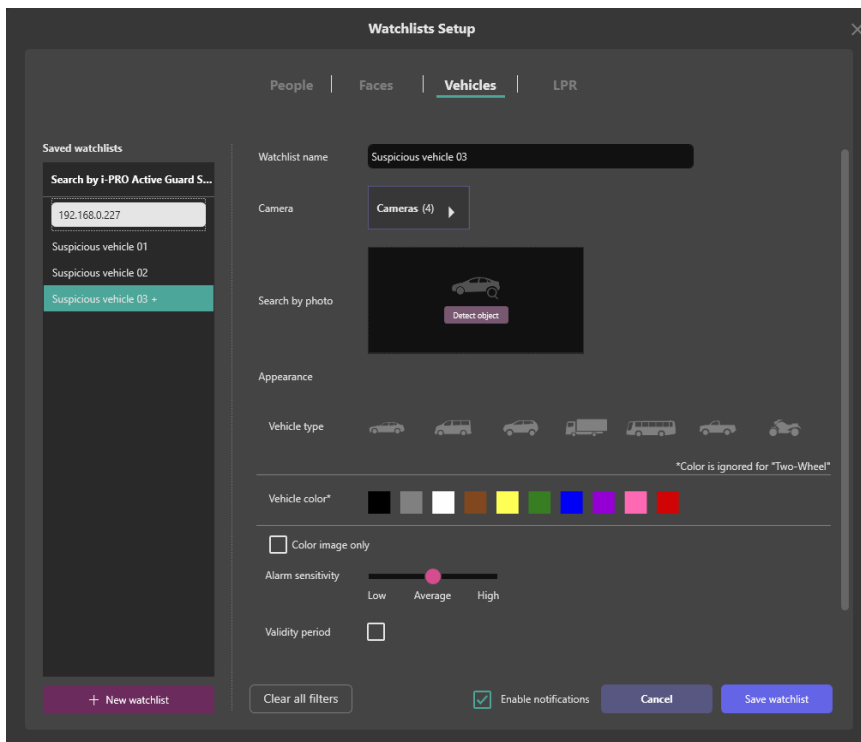
- **Add Registration(To manually select attributes)**

To register a vehicle's appearance to the watchlist, navigate to Set up watchlists button > Vehicle tab.



Registered items are listed on the left side or it uploads the vehicle's picture.

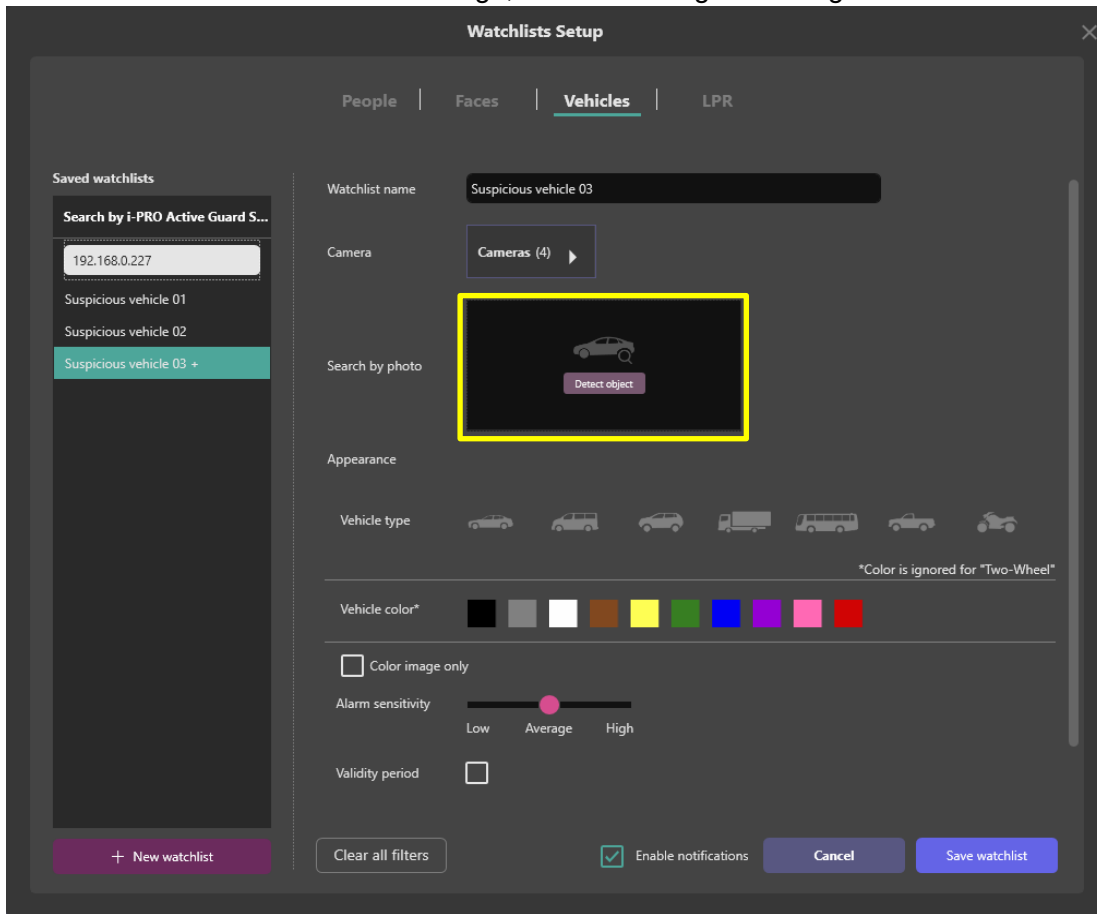
To add new item, click "+ Create a new watchlist" button then select appearance items.



- **Add Registration(To select attributes from an image)**

This procedure automatically selects and registers attributes from an image.

To select attributes from a vehicle image, select the image to be registered from  icon.



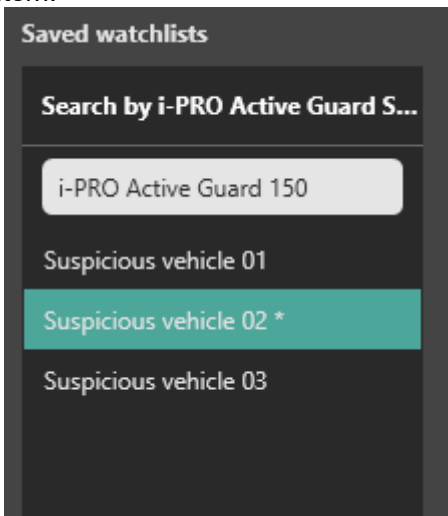
The following procedure is the same as when registering people watchlists, see 2.5.2.

Note:

- Up to 12 vehicle watchlist can be registered.
 - Only one item can be selected from each category. This is because many items register would affect false positives.
 - In Validity Period, two expiration dates can be set.
Disable matching: After the expiration date, this person's face will not be detected.
Delete registration: After the expiration date, we will delete the registration itself of this vehicle.
 - It is impossible to register to multiple i-PRO Active Guard server at the same time.
-

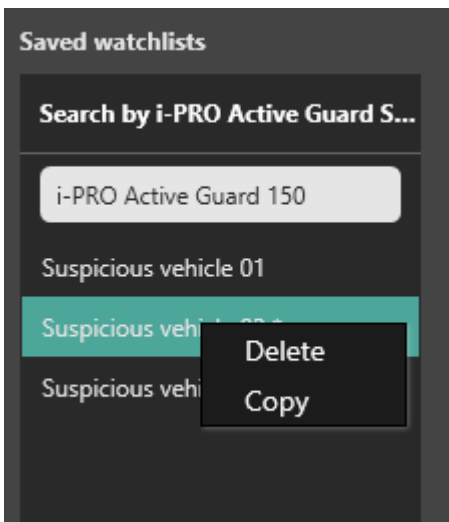
- **Edit Registration**

To edit a registered vehicle appearance, select one of registered item then change selected appearance item.



- **Delete Registration**

To delete a registered vehicle appearance, right click one of registered item.



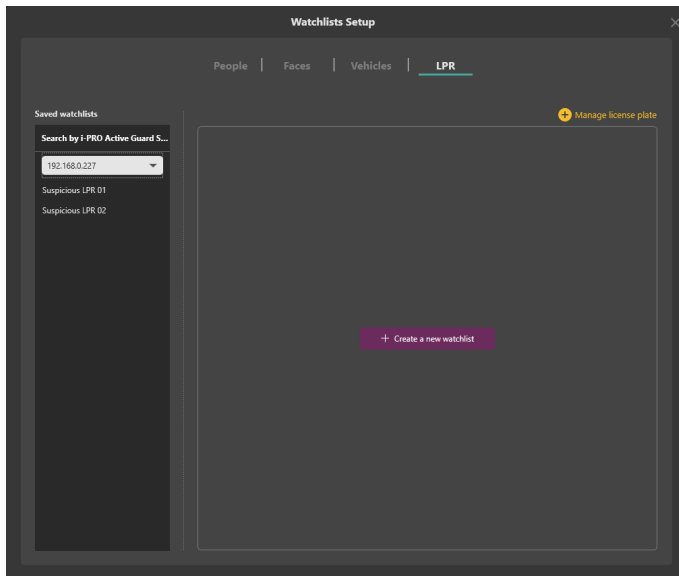
2.5.4. LPR Watchlist

This section describes the operation of add, edit, and delete.

If you don't have a permission to access the watchlist or your camera configuration has no AI-Camera which installed VaxALPR application, then this function is not available.

- **Add Registration**

To register a vehicle's appearance or License plate to the watchlist, navigate to Set up watchlists button > LPR tab.

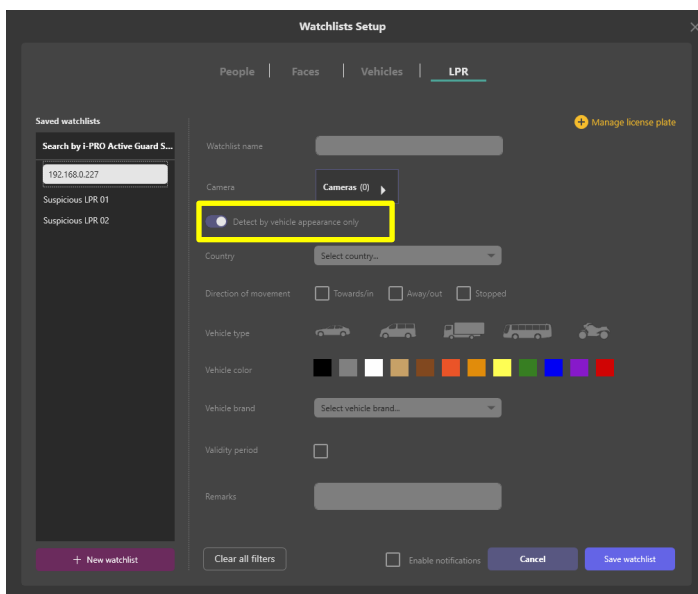


Registered items are listed on the left side or it uploads the vehicle's picture.

To add new item, click "+ Create a new watchlist" button.

- **Add Registration (vehicle appearance)**

Set "Detect by vehicle appearance only" to "On," then select appearance items.



- **Add Registration (License Plate Group)**

Set “Detect by vehicle appearance only” to “Off,” then select license plate group and Trigger.

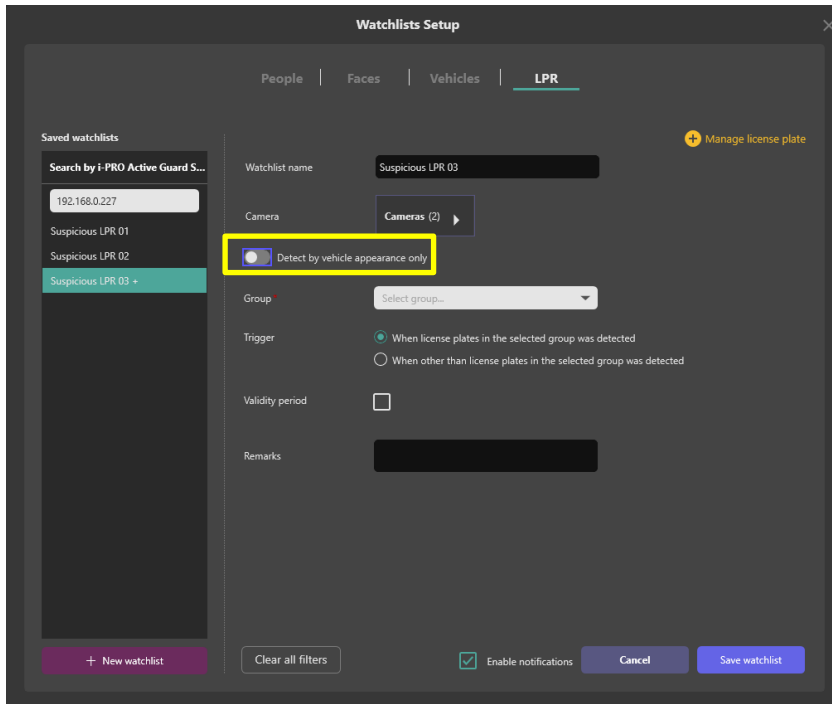
Note)

License plate numbers cannot be set directly in the watchlist.

Please register the license plate to license plate group.

About license plate group, please see 2.5.4.1.

About license plate, please see 2.5.4.2.



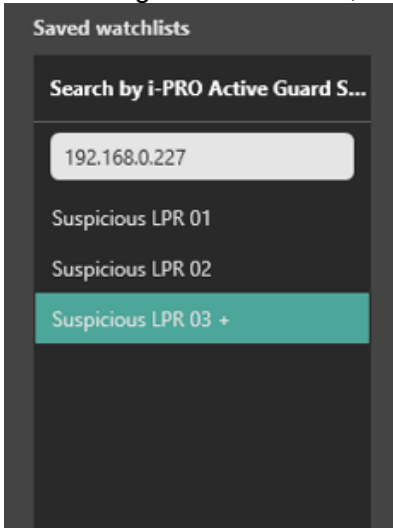
The following procedure is the same as when registering people watchlists, see 2.5.2.

Note:

- There is no limitation to the number of license plate and license plate group (*depending on the system design).
Up to 12 LPR watchlist can be registered.
 - Only one item can be selected from each category. This is because many items register would affect false positives.
 - In Validity Period, two expiration dates can be set.
Disable matching: After the expiration date, this LPR will not be detected.
Delete registration: After the expiration date, we will delete the registration itself of this LPR.
 - It is impossible to register to multiple i-PRO Active Guard server at the same time.
-

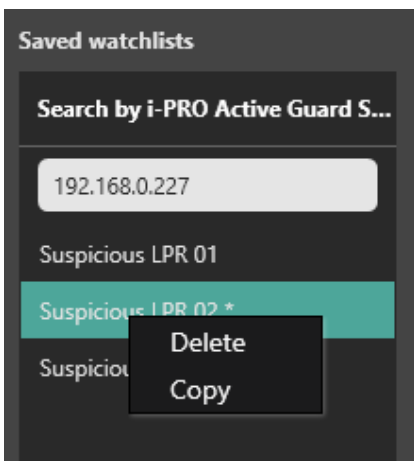
- **Edit Registration**

To edit a registered watchlist, select one of registered item then change selected item.



- **Delete Registration**

To delete a registered vehicle appearance, right click one of registered item.

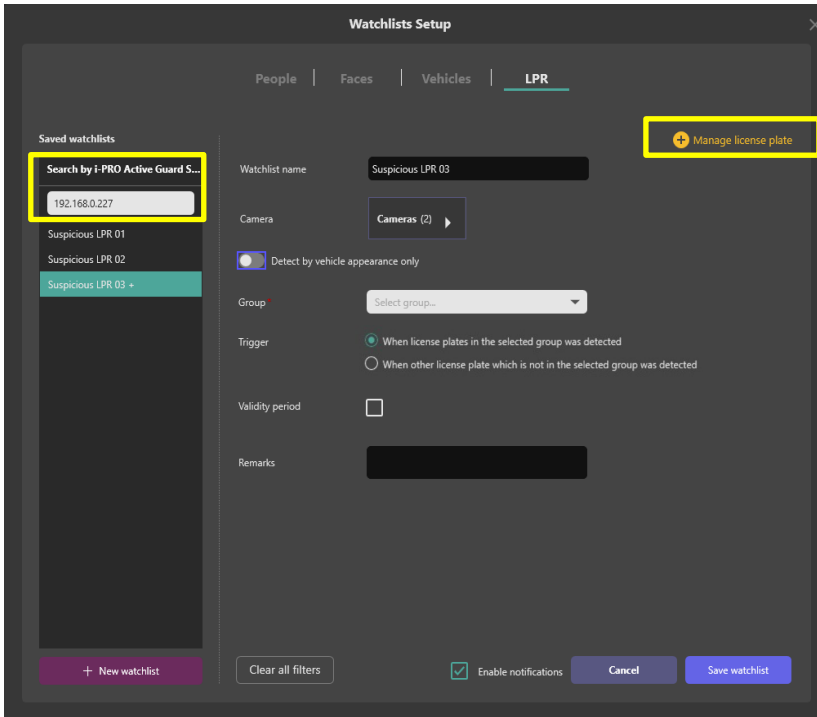


2.5.4.1. Manage License plate group

- **Add Registration**

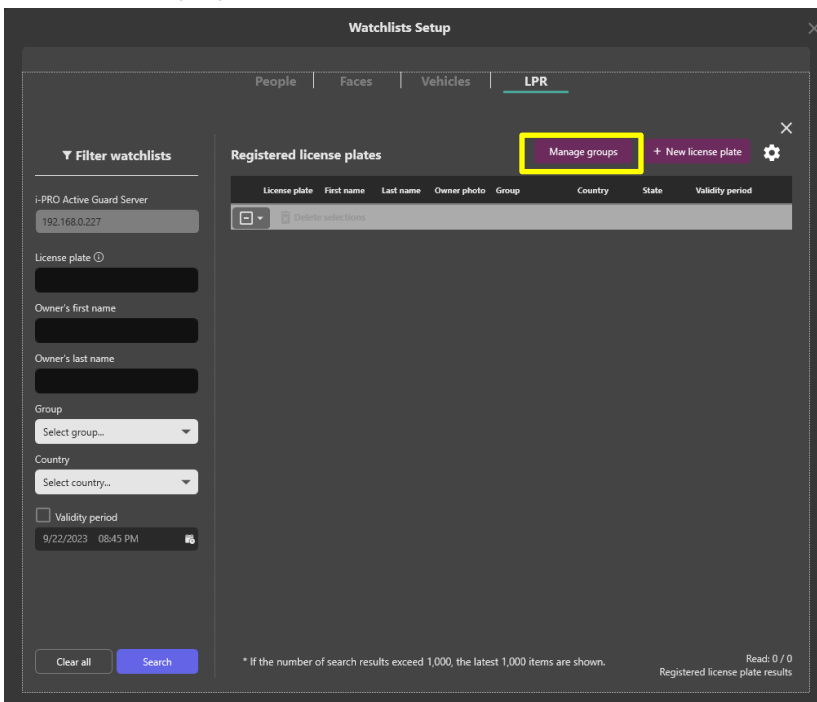
Step 1

In LPR Watchlist Setup screen, select server from “Search by i-PRO Active Guard Server.” Click “+ Manage license plate.”



Step 2

Click “ Manage groups.”



Step 3

Input group name, and "+ Add" button.

The screenshot shows a dark-themed dialog box titled "Manage groups" with a close button (X) in the top right corner. At the top, there is a text input field containing a vertical bar cursor, a blue "+ Add" button, and two grey buttons labeled "Update" and "Remove". Below this is a section titled "Name" with a list of items: "group1" and "group2". The "group2" item is highlighted with a grey background.

Step 4

Click Save group button.

After setting, please close with "x".

The screenshot shows the same "Manage groups" dialog box. The text input field is now empty. The list of items includes "group3 +", "group1", and "group2". The "group1" item is highlighted. At the bottom of the dialog, there are two buttons: "Cancel" and "Save group". The "Save group" button is highlighted with a yellow box. The close button (X) in the top right corner is also highlighted with a yellow box.

- **Edit Registration**

Step 1

Select one of group name from list, then edit group name and click Update button.

Step 2

Click Save group button.

- **Delete Registration**

Step 1

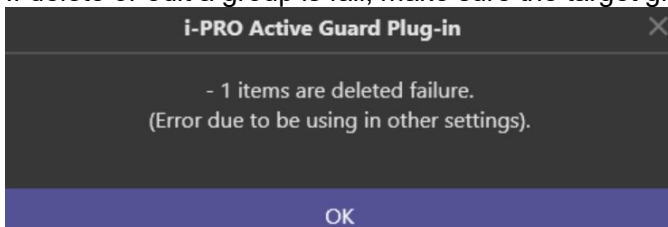
Select one of group name from list, then click Remove button.

Step 2

Click Save group button.

Note)

If delete or edit a group is fail, make sure the target group is not in your LPR watchlists.



2.5.4.2. Manage License plate

- Add Registration(manual registration)

Step 1

In LPR Watchlist Setup screen, select server from “Search by i-PRO Active Guard Server.” Click “+ Manage license plate.”

The screenshot shows the 'Watchlists Setup' window with the 'LPR' tab selected. On the left, there is a 'Saved watchlists' panel with a search bar and a list of watchlists: 'Suspicious LPR 01', 'Suspicious LPR 02', and 'Suspicious LPR 03 +'. The 'Suspicious LPR 03 +' watchlist is selected. The main area shows the configuration for this watchlist: 'Watchlist name' is 'Suspicious LPR 03', 'Camera' is 'Cameras (2)', and 'Detect by vehicle appearance only' is checked. The 'Trigger' is set to 'When license plates in the selected group was detected'. At the bottom right, the '+ Manage license plate' button is highlighted with a yellow box.

Step 2

Click “+ New License plate.”

The screenshot shows the 'Watchlists Setup' window with the 'LPR' tab selected. The 'Registered license plates' section is active, showing a table with columns: 'License plate', 'First name', 'Last name', 'Owner photo', 'Group', 'Country', 'State', and 'Validity period'. The table is currently empty. The '+ New license plate' button is highlighted with a yellow box. On the left, there is a 'Filter watchlists' panel with various search filters: 'i-PRO Active Guard Server' (192.168.0.227), 'License plate', 'Owner's first name', 'Owner's last name', 'Group', 'Country', and 'Validity period' (9/22/2023 08:45 PM). At the bottom, there are 'Clear all' and 'Search' buttons. A note at the bottom states: '* If the number of search results exceed 1,000, the latest 1,000 items are shown.' The bottom right corner shows 'Read: 0 / 0 Registered license plate results'.

Step 3

Click "+ New License plate."

Step 4

Input information then click Save. "License plate" is required.

The screenshot shows the 'Watchlists Setup' dialog box with the 'LPR' tab selected. A 'New license plate' sub-dialog is open, containing the following fields: 'i-PRO Active Guard server' (192.168.0.227), 'License plate' (text input), 'Owner's first name' (text input), 'Owner's last name' (text input), 'Group' (dropdown menu), 'Country' (dropdown menu), 'Validity period' (checkbox), and 'Remarks' (text area). There is also an 'Owner photo' section with a 'Drag and drop image here' area and an 'Upload from file' button. At the bottom of the sub-dialog are 'Cancel' and 'Save' buttons.

Note:


- In Validity Period, two expiration dates can be set.
Disable matching: After the expiration date, this LPR will not be detected.
Delete registration: After the expiration date, we will delete the registration itself of this LPR.

● Add Registration (CSV import)

Register using Import the CSV file export by VI LPR plug-in.

License Plate, First Name and Last Name of CSV information are registered.

Step 1

Click , then click Import CSV.

The screenshot shows the 'Watchlists Setup' dialog box with the 'LPR' tab selected. The 'Registered license plates' section is visible, showing a table with columns: License plate, First name, Last name, Owner photo, Group, Country, State. A yellow box highlights the '+ New license plate' button with a gear icon and the 'Import CSV' button. The 'Filter watchlists' section on the left shows the 'i-PRO Active Guard Server' (192.168.0.167) and various input fields for license plate, owner name, group, and country. At the bottom, there are 'Clear all' and 'Search' buttons, and a footer note: '* If the number of search results exceed 1,000, the latest 1,000 items are shown.' and 'Read: 0 / 0 Registered license plate results'.

Step 2

Select the CSV file, then click Open.

Note)

The CSV format that can be imported is as follows.

License Plate	Country /State	Year	Make	Model	Color	First Name	Last Name	Threat Level
Max.32 characters	-	-	-	-	-	Max.32 characters	Max.32 characters	-

※Only License Plate, First Name and Last Name are registered for i-PRO Active Guard Server.

Example)

License Plate, Country/State, Year, Make, Model, Color, First Name, Last Name, Threat Level
BFP8526, USA-TX, 2020, Honda, Accord, Blue, Hiro, Kitaoka, None123
ABC1234, , , , , John, Smith,

● Edit Registration


Step 1

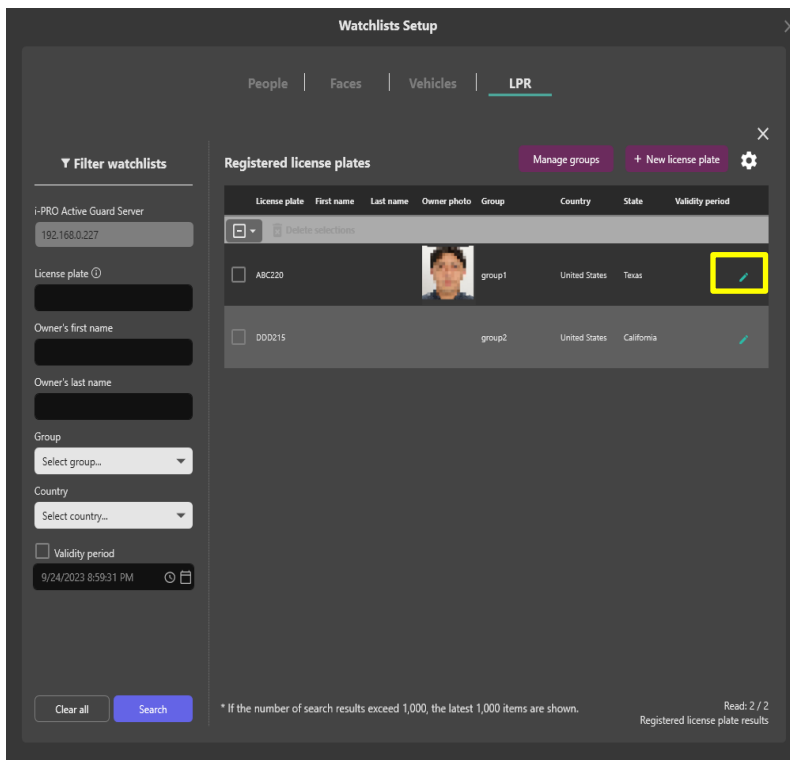
First, find registered license plate you want to edit the information. Registered license plate can be searched by using filter.

Note:

- Up to 1,000 License plates can be shown at the same time. If your search results exceed 1000 results, please set the search filter so that the search results are less than 1000 results.

Step 2

Select one of license plate from search results, then click  button.



The screenshot shows the 'Watchlists Setup' window with the 'LPR' tab selected. On the left, there are filter options for 'i-PRO Active Guard Server' (IP address: 192.168.0.227), 'License plate', 'Owner's first name', 'Owner's last name', 'Group', 'Country', and 'Validity period'. The main area displays a table of 'Registered license plates' with columns for License plate, First name, Last name, Owner photo, Group, Country, State, and Validity period. Two entries are visible: 'ABC220' (group1, United States, Texas) and 'DDD215' (group2, United States, California). The 'ABC220' row is highlighted, and its edit icon (a pencil) is circled in yellow. At the bottom, there are 'Clear all' and 'Search' buttons, and a note: '* If the number of search results exceed 1,000, the latest 1,000 items are shown.' The status bar at the bottom right indicates 'Read: 2 / 2 Registered license plate results'.

Step 3

Edit any information then click Save.

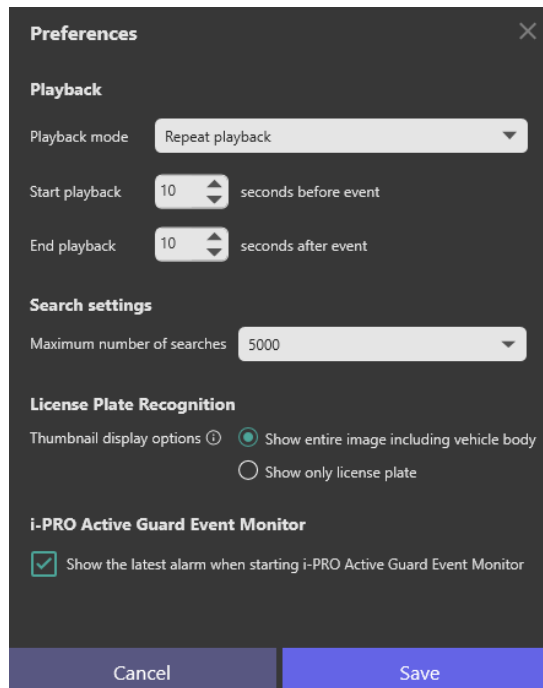
● Delete Registration

Step 1

Select check box of license plate from list, then click Delete selections button.

2.5.5. Preferences

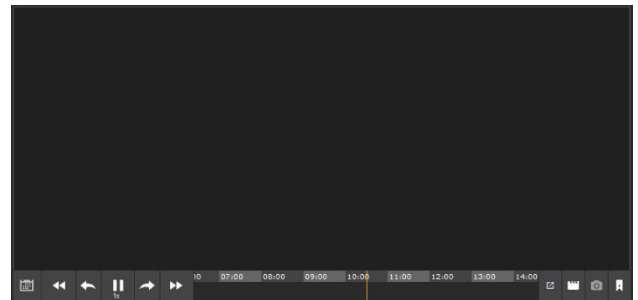
Preferences provides some option settings such as playback video mode and so on.



A. Playback

You can select continue to playback mode or repeat playback mode. When using repeat playback mode, it needs to set up Start playback and End playback.

This setting is available both of i-PRO Active Guard Search and i-PRO Active Guard Event.

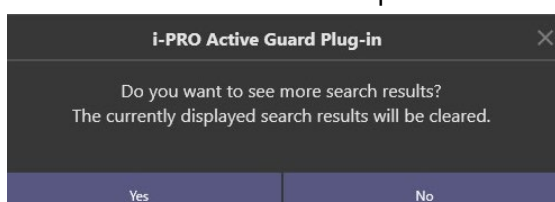


B. Search setting

You can select maximum number of searches from 1000 to 5000.

After the maximum number is reached, below message will be displayed.

Select whether to clear and update the currently displayed search results or keep current display.

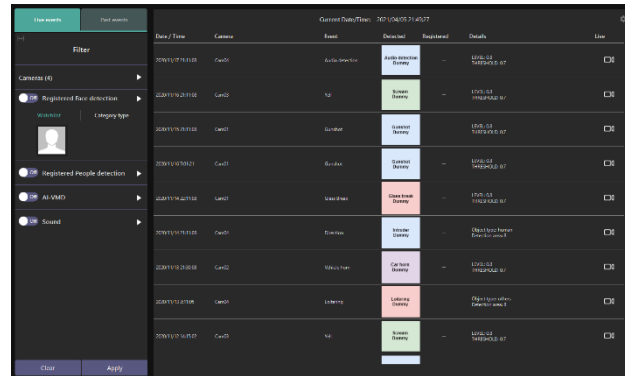


C. License Plate Recognition

You can set whether to show the entire vehicle including the license plate or only the license plate in the search results.

D. Show the latest alarm when starting event monitor

When you start-up i-PRO Active Guard Event, the latest detected events are loaded automatically to prevent from overlooking important events.



View events	Clear events	Current Query/Filter: 2023/04/05 21:45:27					
Filter	Date/Time	Camera	Event	Description	Registered	Details	View
Camera(s) (4)	2023/11/07 18:10:02	Cam01	Audio detection	Audio detection Event	—	LPPL102 1025000000 01	View
<input checked="" type="radio"/> Registered Face detection	2023/11/09 21:11:02	Cam02	Ng	Ng Event	—	LPPL102 1025000000 01	View
<input checked="" type="radio"/> Registered People detection	2023/11/09 18:11:02	Cam01	Abuse	Abuse Event	—	LPPL102 1025000000 01	View
<input checked="" type="radio"/> All VMD	2023/11/09 20:11:02	Cam01	Abuse	Abuse Event	—	LPPL102 1025000000 01	View
<input checked="" type="radio"/> Scaled	2023/11/09 20:11:02	Cam01	Video Area	Video Area Event	—	LPPL102 1025000000 01	View
	2023/11/09 18:11:02	Cam01	Fire Alarm	Fire Alarm Event	—	LPPL102 1025000000 01	View
	2023/11/09 21:00:02	Cam02	Vehicle Turn	Vehicle Turn Event	—	LPPL102 1025000000 01	View
	2023/11/09 21:01:02	Cam02	License	License Event	—	LPPL102 1025000000 01	View
	2023/11/09 18:10:02	Cam01	Ng	Ng Event	—	LPPL102 1025000000 01	View

2.5.6. Attribute Settings

Attribute Settings provide settings to visibility of attributes.

Unchecked attributes will be hidden in filter and watchlist settings.

Attribute Settings

People

- Gender
- Age
- Hair
- Top
- Bottom
- Sunglasses
- Beard
- Mask
- Bag
- Shoes
- Moving Direction

Faces

- Age
- Gender

Vehicles

- Vehicle type
- Vehicle color
- Moving Direction

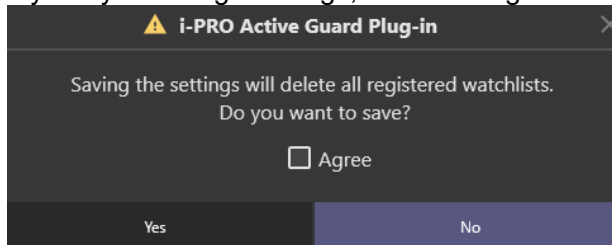
LPR

- Country/State
- Moving Direction
- Vehicle type
- Vehicle color
- Brand/Model
- Owner's name/photo

Default settings Cancel Save

Note:

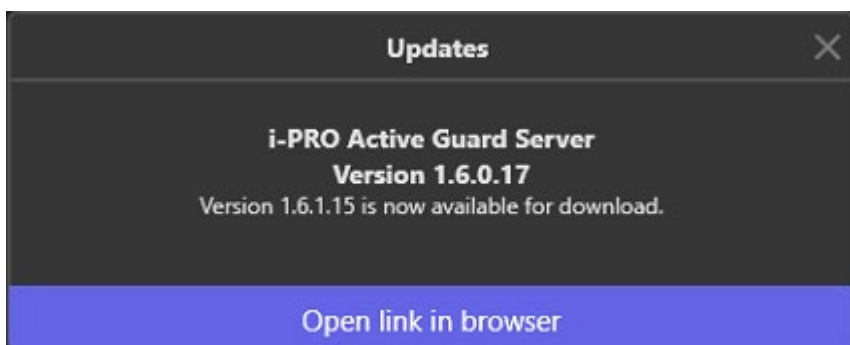
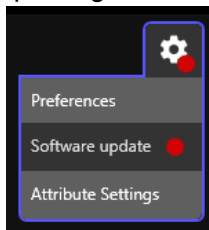
- Other than faces setting cannot be changed if watchlists is already registered. If you try to change settings, the following message.



When multiple i-PRO Active Guard servers are registered in Plug-in, watchlists will be deleted from all registered servers.

2.5.7. Software updates

A notification and pop-up will appear as follows when the currently used Sever or Plug-in is available for updating.



Note:

- [Software update] will not appear in environments without an Internet connection.
-

3. TROUBLESHOOTING

Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution
Face, People or Vehicle images cannot be searched (the number of search result is 0).	Check if schedule setting on camera side for extension software is on. Receiving status from each camera can be confirmed from i-PRO Active Guard configuration (see Setup instruction manual).
False detection (Not face, people or vehicle is searched)	To avoid false detection, configure mask area using iCT (i-PRO Configuration Tool).
Playback time is incorrect.	Check if PC time of i-PRO Active Guard server and VMS server are synchronized when i-PRO Active Guard server is installed to dedicated server. Also check if time zone setting of VMS server and VMS client are the same.
Detected thumbnail is not attached with alarm.	Detected image shows when 1920x1080 or smaller resolution is set for JPEG (2) on camera setting. When higher resolution is set or JPEG (2) is not available, detected image may not be shown.
Object type like human or vehicle is not shown on Details of Event monitor for AI-VMD alarm.	Check AI-VMD setting on camera side. "With detection object information (alarm frame information)" or "With detection object information (AI frame information)" should be configured for "Additional information type."
Failed to register Face	If there are no margin around face image, it may increase encountering failure.
When access the Web setting page after a certain period of time, "A timeout has occurred." is displayed.	For security protection, if you do not operate for a while with the WEB setting page, a timeout will occur and you will not be able to change the settings. In such a case, close the web browser, access it again, and enter the authentication information.
False alarm of face matching.	Please adjust "Alarm threshold" according to your environment and registered face image.
Saved filters don't work correctly after upgrade	Please reset your filters, After upgrading from V1.60 or earlier to V1.70 or later, "Color image only" of the saved filters may not work correctly.
Edit or delete license plate group is fail	Please make sure the target group is not in your LPR watchlists.
The display of Web setting page is misaligned.	Please try clearing the cache in your web browser, and close the web browser, access it again.

4. Appendices

4.1. Specifications

Please refer to the following URL for details on specifications.

https://i-pro.com/products_and_solutions/en/surveillance/documentation-database/i-pro-ai-applications-spec-sheet-us

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[JSON for Modern C++]

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