



Web Guide

Extension software

(AI Processing Relay for new X series cameras)

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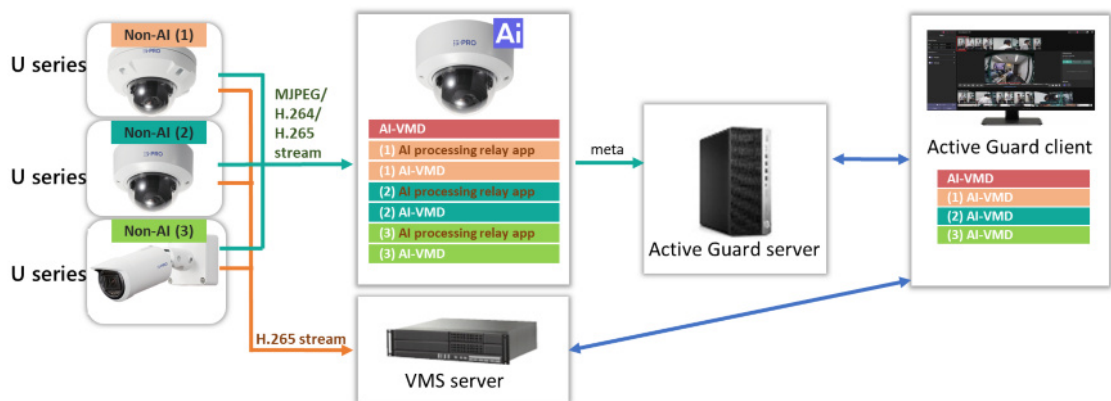
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1 Introduction

This document describes how to install the AI Process Relay Application (hereinafter referred to as "the Product"), a function extension software, on the new X series cameras and the settings required before starting operation. Since this product is intended to be installed and used with a camera, please be sure to read the instruction manual of your camera as well before use. The setting screens described in this manual may differ from some of the screens depending on the camera model, i-PRO Configuration Tool (iCT: i-PRO Configuration Tool) or i-PRO Active Guard version used.

1.1 Product Overview



This product is software for more convenient use of AI network cameras (sold separately). By installing this product on a camera, configuring non-AI camera settings, and configuring the extension software, AI processing can be performed on video from cameras that do not have AI functions.

This product is guaranteed to work with the new X series cameras. If a non-AI camera supports MJPEG streaming via HTTP/HTTPS/RTSP or H.264/H.265 streaming via RTSP, it can import video into this product for AI processing. AI processing is handled by the extension software installed in the new X series camera. The extension software is required separately. This product can be used in combination with the following extension software.

- AI-VMD (AI Video Motion Detection)
- AI People detection

- AI Vehicle detection
- AI Occupancy detection
- AI Scene change detection

The extension software outputs the Onvif Event Stream as AI processing results. i-PRO Active Guard is required to operate this product.



- Please refer to the following web page for information on compatible models and software versions of this product.
 - [Technical Information](#) [Control number: C0103]
 - [Accessory Selector](#)
- Up to three non-AI cameras can be connected to a single new X-Series camera.
- The AI On-site learning applications cannot be used for non-AI camera video received using this product.

1.2 Features

This product is software for the new X series cameras that can receive MJPEG/H.264/H.265 video stream from other cameras and perform AI processing using the function extension software; AI processing results can be used with "i-PRO Active Guard" to receive alarms and perform image search. It can also be used to add AI functions to cameras that are already installed.

1.3 Installation conditions of the product

This product receives MJPEG/H.264/H.265 video stream from non-AI cameras and performs AI processing using the extension software installed in the new X series cameras. Installation conditions for non-AI cameras, such as angle of view, are in accordance with the installation conditions of the respective extension software. Detection performance depends on the image quality of the non-AI camera. Please confirm the operation with the actual camera before use.

1.4 Precautions

1. This product must be used with the latest firmware for the new X series cameras.

2. There are limitations on the recommended resolution, frame rate, bit rate, codecs, number of non-AI cameras connected simultaneously, and number of extension software that can be used simultaneously. For details, please refer to [Technical Information](#) [Control Number: C0103].
 - For use with MJPEG:

A command to retrieve MJPEG (HTTP/HTTPS/RTSP) data from non-AI cameras is required. The frame rate of the non-AI camera should be 3~5 fps. Up to 3 non-AI cameras can be connected.
 - For use with H.264:

A command to acquire H.264(RTSP) data from non-AI cameras is required. The total frame rate/bit rate of non-AI cameras must be within 15 fps/3 Mbps. Up to 3 non-AI cameras can be connected.
 - For use with H.265:

A command to acquire H.265(RTSP) data from non-AI cameras is required. The frame rate/bit rate of the non-AI camera must be within 10 fps/1 Mbps. Up to one non-AI camera can be connected.
3. When this product is installed on a new X series camera, the processing of the function extension software installed on the new X series camera may stop until the settings of this product are properly configured. Once the settings of this product are completed and video stream data is received from the non-AI camera, the extension software will operate correctly.
4. Reboot the new X series camera after uninstalling this product. Rebooting the new X series camera will allow the extension software installed on the new X series camera to operate correctly.
5. Set the "Image capture mode" to "16:9 mode(30fps mode)" or "16:9 mode(25fps mode)".
6. For image rotation of the new X series cameras and non-AI cameras, set "0 degrees" or "180 degrees".
7. It is recommended that the "Alarm" > "Camera action on alarm" items in the camera's setup screen be set to Off. Alarms from Camera 2 to Camera 4 will operate as alarms for Camera 1.

2 Preparation

The flow up to the operation is as follows. This chapter describes 1) and 2).

- 1) Confirm the operating conditions of the product
→ [2.1 Confirm the operating conditions of the product](#)
- 2) Install this product and extension software
→ [2.2 Install this product and extension software](#)
- 3) Configure this product
→ [3.1 Configure this product](#)
- 4) Configure extension software that work with this product
→ [3.2 Configure extension software that work with this product](#)
- 5) Configure i-PRO Active Guard
→ [3.3 Configure i-PRO Active Guard](#)
- 6) Configure i-PRO Active Guard for VMS to receive AI-VMD and AI Occupancy Detection alarms
→ [3.4 Configure i-PRO Active Guard for VMS to receive AI-VMD and AI Occupancy Detection alarms](#)
- 7) Start operation

2.1 Confirm the operating conditions of the product

When using this product, there are the following limitations on the number of extension software that can run simultaneously.



- When adding non-AI cameras, pay attention to the number of extension software installed. To ensure that the maximum number of simultaneous operations of the extension software is not exceeded, uninstall the extension software before adding non-AI cameras.

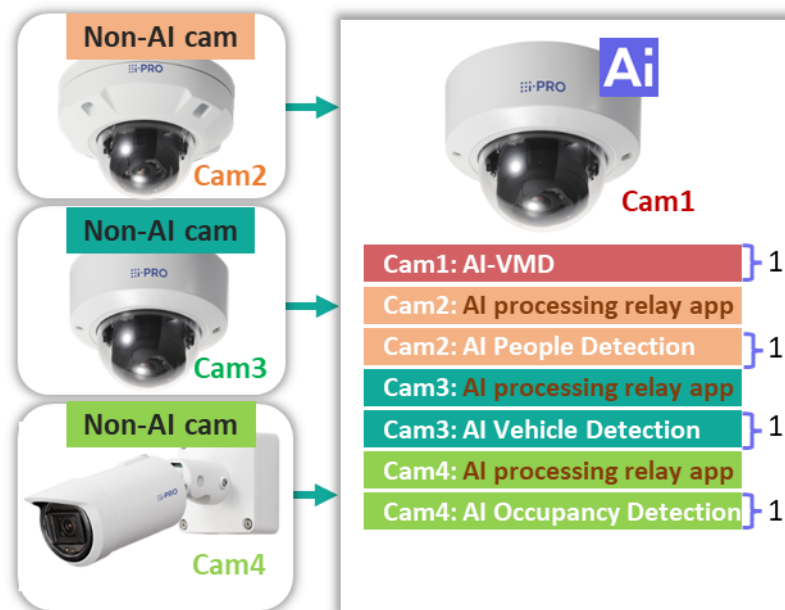
Conditions for using three non-AI cameras

Operating conditions when three non-AI cameras are used are shown below. The maximum number of extension software that can run simultaneously for each camera is 1. Use MJPEG/H.264 for non-AI camera streams.

2 Preparation

2.1 Confirm the operating conditions of the product

	Camera Type	Maximum number of extension software running at the same time	Extension software	Remarks
Camera1	New X Series Camera	1	- AI-VMD	In case of using MJPEG for the stream of non-AI cameras: - Set the frame rate for non-AI cameras to 3~5fps. In case of using H.264 for the stream of non-AI cameras: - The total frame rate for non-AI cameras must be within 15fps and the total bit rate must be within 3Mbps.
Camera2	Non-AI camera	1	- AI People detection	
Camera3	Non-AI camera	1	- AI Occupancy detection	
Camera4	Non-AI camera	1	- AI Scene change detection	
			Note: Up to one AI Scene change detection can be used from any one of Camera1,2,3,4	



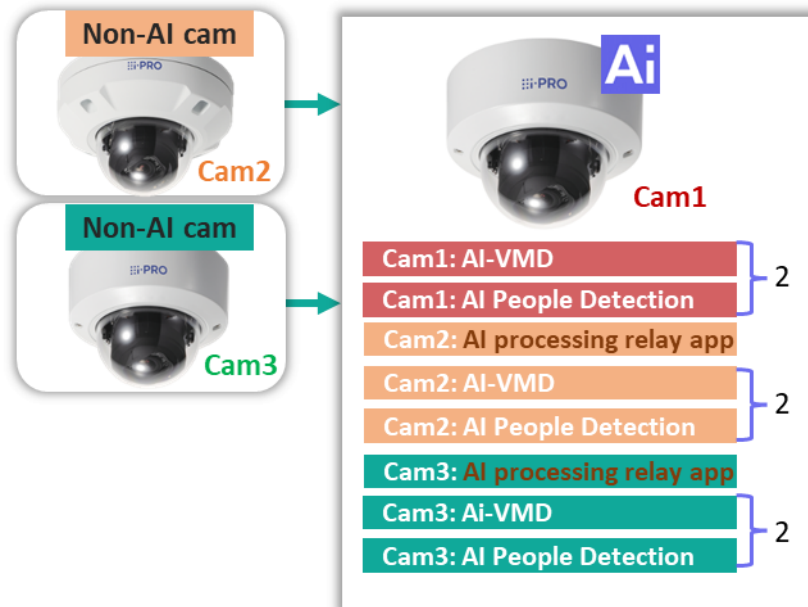
Conditions for using two non-AI cameras

Operating conditions when two non-AI cameras are used are shown below. The maximum number of extension software that can run simultaneously for each camera is 2. Use MJPEG/H.264 for non-AI camera streams.

2 Preparation

2.1 Confirm the operating conditions of the product

	Camera Type	Maximum number of extension software running at the same time	Extension software	Remarks
Camera1	New X Series Camera	2MP camera:2 5MP camera:2 8MP camera:1	<ul style="list-style-type: none"> - AI-VMD - AI People detection - AI Vehicle detection - AI Occupancy detection - AI Scene change detection <p>Note: Up to one AI Scene change detection can be used from any one of Camera1,2,3</p>	<p>In case of using MJPEG for the stream of non-AI cameras:</p> <ul style="list-style-type: none"> - Set the frame rate for non-AI cameras to 3~5fps. <p>In case of using H.264 for the stream of non-AI cameras:</p> <ul style="list-style-type: none"> - The total frame rate for non-AI cameras must be within 15fps and the total bit rate must be within 3Mbps.
Camera2	Non-AI camera	2		
Camera3	Non-AI camera	2		



Conditions for using a single non-AI camera

Operating conditions when using a single non-AI camera are shown below. The maximum number of extension software that can run simultaneously for each camera is 3.

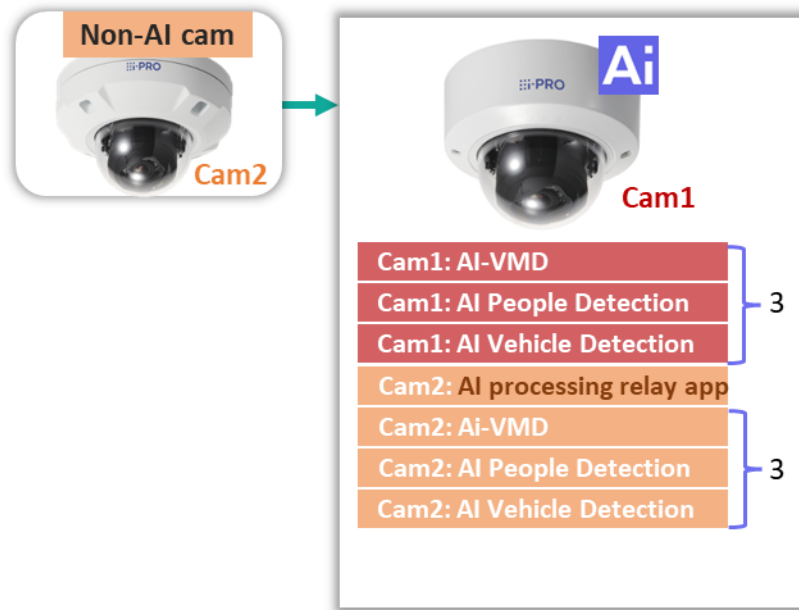
2 Preparation

2.1 Confirm the operating conditions of the product

	Camera Type	Maximum number of extension software running at the same time	Extension software	Remarks
Camera1	New X Series Camera	2MP camera:3 5MP camera:3 8MP camera:2		In case of using MJPEG for the stream of non-AI cameras: - Set the frame rate for non-AI cameras to 3~5fps.
Camera2	Non-AI camera	3	<ul style="list-style-type: none"> - AI-VMD - AI People detection - AI Vehicle detection - AI Occupancy detection - AI Scene change detection <p>Note: Up to one AI Scene change detection can be used from any one of Camera1,2</p>	<p>In case of using H.264 for the stream of non-AI cameras:</p> <ul style="list-style-type: none"> - The total frame rate for non-AI cameras must be within 15fps and the total bit rate must be within 3Mbps. <p>In case of using H.265 for the stream of non-AI cameras</p> <ul style="list-style-type: none"> - The frame rate of non-AI cameras must be within 10 fps and bit rate must be within 1 Mbps. - The maximum number of simultaneous operations of the enhanced software must be 3 or less in total for Camera1, 2.

2 Preparation

2.2 Install this product and extension software



- The new X series cameras can also be used with software other than the software that is linked to this product. Please refer to the website below for software combinations that can be used at the same time.

→ [Technical Information](#) [Control number: C0103]

→ [Accessory Selector](#)

2.2 Install this product and extension software

Follow the steps below to install this product and the extension software.

- 1) [2.2.1 Uninstall pre-installed extension software](#)
- 2) [2.2.2 Download this product](#)
- 3) [2.2.3 Install an extension software for Camera1.](#)
- 4) [2.2.4 Install extension software for cameras 2, 3, and 4](#)

2.2.1 Uninstall pre-installed extension software

Uninstall all preinstalled extension software.

- ① Start iCT and click on "Ext. Software Management" in the menu on the left side.
- ② Click on "Remove App./Reg.Key".
- ③ Click on the tab "Main" at the top of the device list.
- ④ Check the cameras to remove all extension applications from the device list.

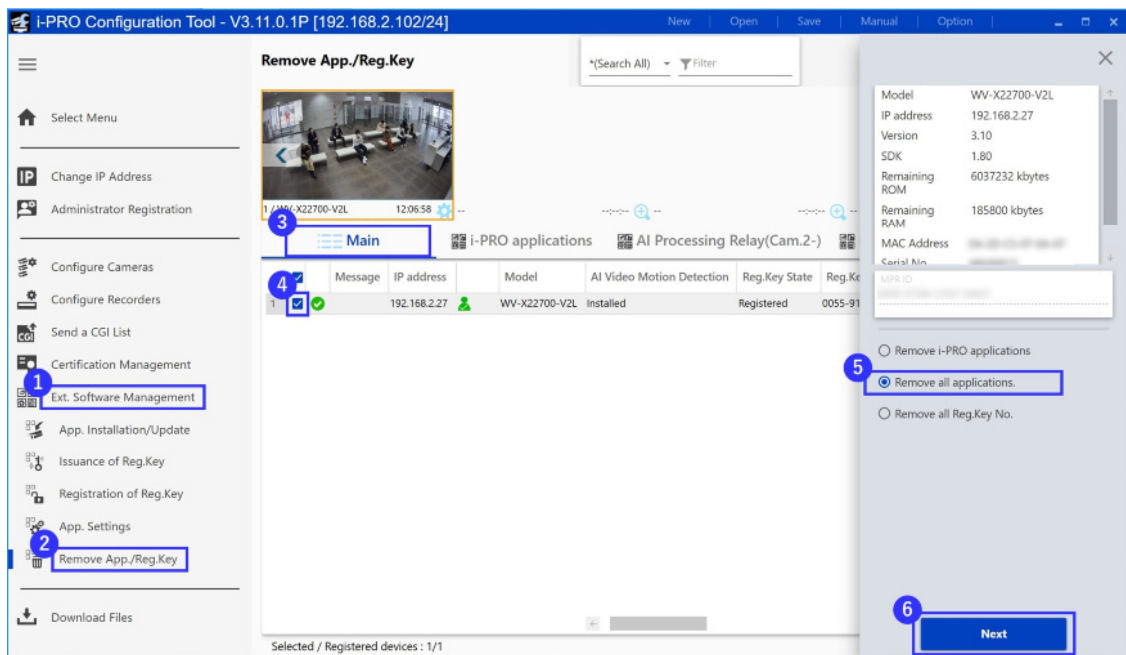
2 Preparation

2.2 Install this product and extension software



This procedure removes all extension software installed on the camera. Make sure that only the target camera is checked.

- ⑤ Select "Remove all applications" from the menu on the right and click "Next".
- ⑥ After confirming the dialog, click "Yes" and follow the on-screen guidance. After a short wait, all extension applications will be removed.



2.2.2 Download this product

Access the product's download site, download the "AI Processing Relay Application", and unzip the zip file. The zip file contains the following software.

Extension software for video processing of the new X-Series cameras

- XAE200_vXXXX.ext
- AIPeopleDetection_vXXXX.ext
- AIVehicleDetection_vXXXX.ext
- XAE207_vXXXX.ext
- AISceneChangeDetection_vXXXX.ext

AI Processing relay application

- AIProcessingRelay-Cam2_vXXX.ext
- AIProcessingRelay-Cam3_vXXX.ext
- AIProcessingRelay-Cam4_vXXX.ext

Extension software for non-AI camera video processing

Software to work with AIProcessingRelay-Cam2_vXXX.ext

- XAE200-Cam2_vXXXX.ext
- AIPeopleDetection-Cam2_vXXXX.ext
- AIVehicleDetection-Cam2_vXXXX.ext
- XAE207-Cam2_vXXXX.ext
- AISceneChangeDetection-Cam2_vXXXX.ext

Software to work with AIProcessingRelay-Cam3_vXXX.ext

- XAE200-Cam3_vXXXX.ext
- AIPeopleDetection-Cam3_vXXXX.ext
- AIVehicleDetection-Cam3_vXXXX.ext
- XAE207-Cam3_vXXXX.ext
- AISceneChangeDetection-Cam3_vXXXX.ext

Software to work with AIProcessingRelay-Cam4_vXXX.ext

- XAE200-Cam4_vXXXX.ext
- AIPeopleDetection-Cam4_vXXXX.ext
- AIVehicleDetection-Cam4_vXXXX.ext
- XAE207-Cam4_vXXXX.ext
- AISceneChangeDetection-Cam4_vXXXX.ext



- For the download site of this product, please refer to the following:

→ [AI Processing Relay](#)

- XAE200_vXXX.ext, XAE200-Cam2_vXXX.ext, XAE200-Cam3_vXXX.ext and XAE200-Cam4_vXXX.ext are files of "AI-VMD".

- XAE207_vXXX.ext, XAE207-Cam2_vXXX.ext, XAE207-Cam3_vXXX.ext and XAE207-Cam4_vXXX.ext are files of "AI Occupancy Detection".



Do not use spaces or multi-byte characters in the destination directory name.

In the following sections, we will explain the procedure for installing three non-AI cameras and the extension software shown in [Table 1. Installation Example](#), using the configuration shown in the section "[Conditions for using three non-AI cameras](#)" as an example.

2 Preparation

2.2 Install this product and extension software

Table 1. Installation Example

	Camera type	AI Processing relay application file name	Extension software file name
Camera1	New X series camera	---	XAE200_vXXX.ext
Camera2	Non-AI camera	AIProcessingRelay-Cam2_vXXX.ext	AIPeopleDetection-Cam2_vXXX.ext
Camera3	Non-AI camera	AIProcessingRelay-Cam3_vXXX.ext	AIVehicleDetection-Cam3_vXXX.ext
Camera4	Non-AI camera	AIProcessingRelay-Cam4_vXXX.ext	XAE207-Cam4_vXXX.ext



When using the AI processing relay application, please use the files included in the zip file of this product, which also contains the extension software for the new X series cameras.



- Refer to [4.1.3 Combination of this product and compatible software](#) for the combination of the Product and extension software files.
- There are no restrictions on the order of software installation. Install all of the extension software files you will be using.

2.2.3 Install an extension software for Camera1.



Be sure to install the software for Camera 1 first. When installing the software for Camera 1 while the software for Camera 2, Camera 3, or Camera 4 is already installed, delete the software for Camera 2, Camera 3, or Camera 4, and then install the software for Camera 1.

Install the extension software for the new X-series cameras for Camera1.

- ① Start iCT and click on "Ext. Software Management" in the menu on the left side.
- ② Click on "App. Installation/Update".
- ③ Click on the tab "Main" at the top of the device list.
- ④ Check the cameras for which you want to install the extension software from the device list.
- ⑤ Select "AI Video Motion Detection" from the "Extension Software" pull-down menu on the right side menu of the iCT.
- ⑥ Specify the folder where you extracted the zip file downloaded from the product's download

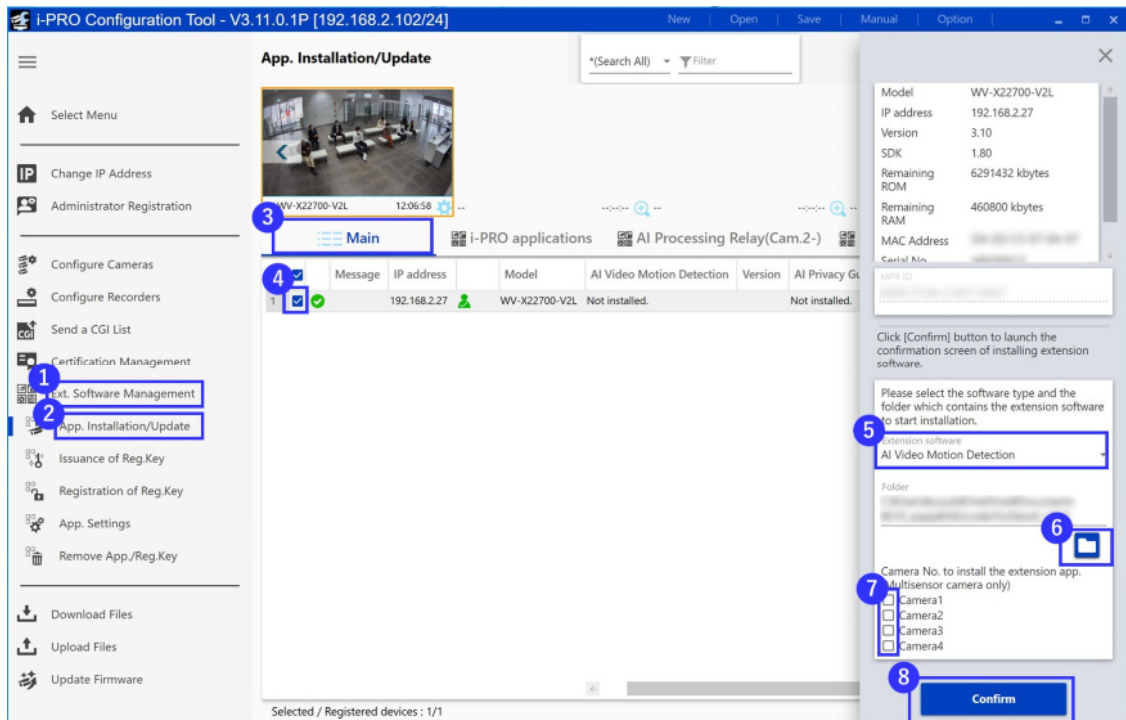
2 Preparation

2.2 Install this product and extension software

site.

- ⑦ Uncheck Camera1 through Camera4.
- ⑧ Click the "Confirm" button.

Follow the on-screen guidance to install the AI-VMD (XAE200_vXXX.ext) for Camera1 new X series.



Installing Camera1-specific extension software

- Camera 1 can be used with other software than the extension software that is linked to this product.
- Extension software for Camera1 can be downloaded from the [website](#).
- Please unzip the downloaded zip file.

Installation Procedure

- In the above procedure, change (⑤) and (⑥) to the software for which you wish to install the extension software as follows.
- At ⑤, select the downloaded software from the pull-down menu of "Extension Software" on the right side menu of iCT.
- In step ⑥, specify the folder where the zip file was extracted.

2 Preparation

2.2 Install this product and extension software



- Do not turn off the camera during installation.
- Do not perform any operation during installation until the installation is completed.

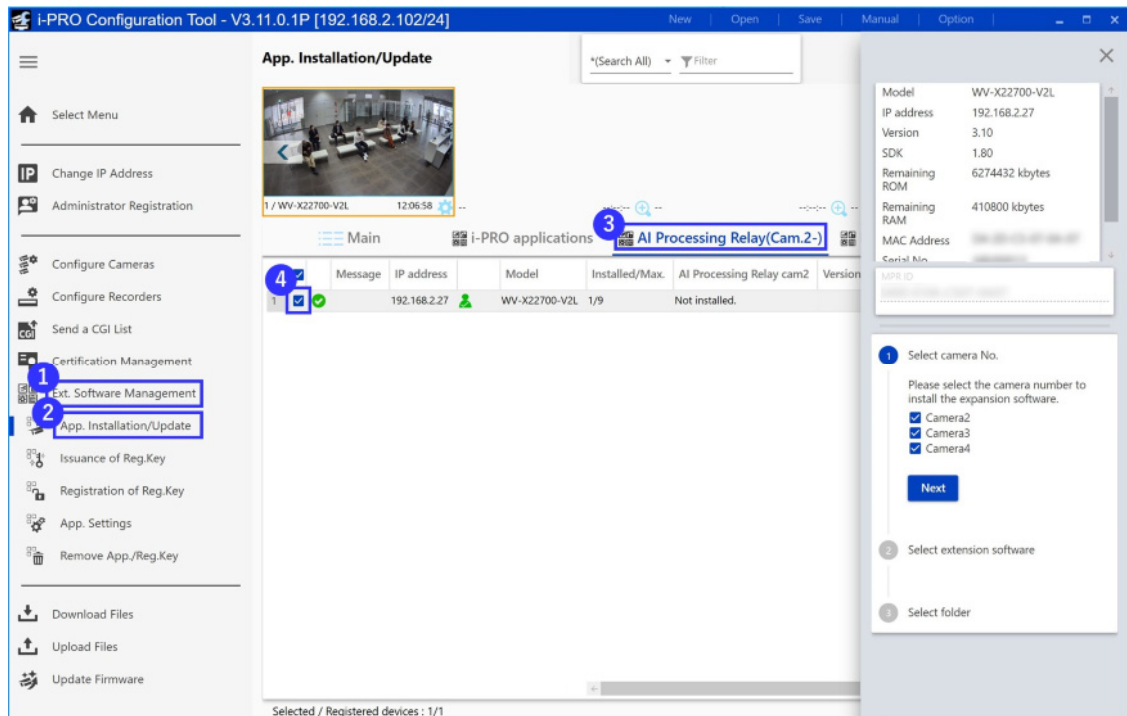
2.2.4 Install extension software for cameras 2, 3, and 4



Be sure to install the software for Camera 1 first. When installing the software for Camera 1 while the software for Camera 2, Camera 3, or Camera 4 is already installed, delete the software for Camera 2, Camera 3, or Camera 4, and then install the software for Camera 1.

Install the extension software shown in [Table 1. Installation Example](#) for non-AI cameras 2, 3, and 4.

- ① Start iCT and click on "Ext. Software Management" in the menu on the left side.
- ② Click on "App. Installation/Update".
- ③ Click on the tab "AI Processing Relay(Cam.2-)" at the top of the device list.
- ④ Check the cameras for which you want to install the extension software from the device list.



The following procedure is the operation of the "AI Processing Relay(Cam.2-)" screen. There is no installation order for Camera 2, Camera 3, and Camera 4 extension software.

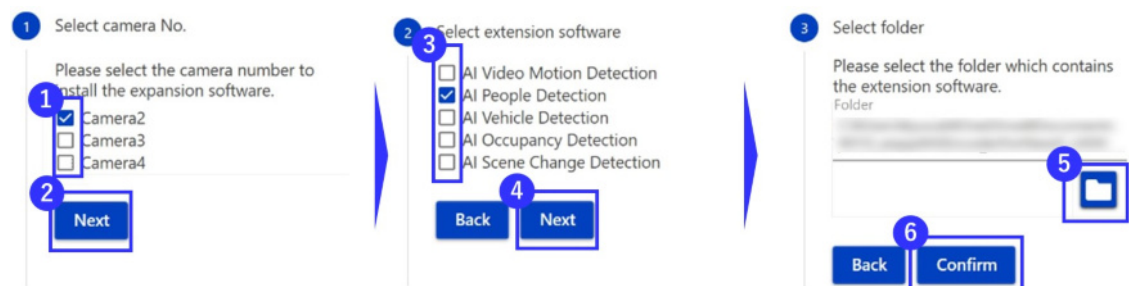
2 Preparation

2.2 Install this product and extension software

Install the AI People Detection for Camera2.

- ① From the menu on the right side of the "AI Processing Relay(Cam.2-)" tab and check "Camera2".
- ② Click "Next".
- ③ Check "AI People Detection".
- ④ Click "Next".
- ⑤ Specify the folder where you extracted the zip file downloaded from the product's download site.
- ⑥ Click "Confirm".

Follow the on-screen guidance to install the AI People Detection for Camera2 (AIPeopleDetection-Cam2_vXXX.ext) and the AI Processing Relay for Camera2 (AIProcessingRelay-Cam2_vXXX.ext).



Click the "Back" button to return to "Select camera No.".

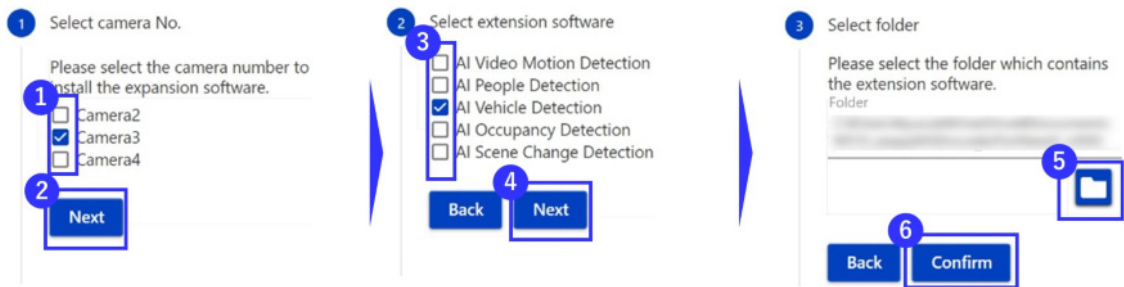
Install the AI Vehicle Detection for Camera3.

- ① From the menu on the right side of the "AI Processing Relay (Cam.2-)" tab and check "Camera3".
- ② Click "Next".
- ③ Check "AI Vehicle Detection".
- ④ Click "Next".
- ⑤ Specify the folder where you extracted the zip file downloaded from the product's download site.
- ⑥ Click "Confirm".

Follow the on-screen guidance to install the AI Vehicle Detection for Camera3 (AIVehicleDetection-Cam3_vXXX.ext) and the AI Processing Relay for Camera3 (AIProcessingRelay-Cam3_vXXX.ext).

2 Preparation

2.2 Install this product and extension software

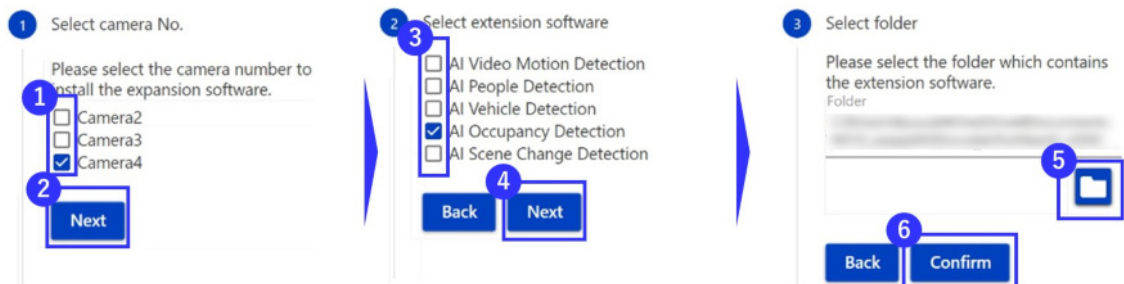


Click the "Back" button to return to "Select camera No."

Install the AI Occupancy Detection for Camera4.

- ⑦ From the menu on the right side of the "AI Processing Relay (Cam.2-)" tab and check "Camera4".
- ⑧ Click "Next".
- ⑨ Check "AI Occupancy Detection".
- ⑩ Click "Next".
- ⑪ Specify the folder where you extracted the zip file downloaded from the product's download site.
- ⑫ Click "Confirm".

Follow the on-screen guidance to install the AI Occupancy Detection for Camera4 (XAE207-Cam4_vXXX.ext) and the AI Processing Relay for Camera4 (AIProcessingRelay-Cam4_vXXX.ext).



Specifying Multiple Cameras and Multiple Extension Software to be Installed at the same time.

- If you wish to install the extension software for multiple non-AI cameras at the same time, select multiple cameras in "Select Camera No." (①).
- If you wish to install multiple extension software for the selected cameras, please select multiple software in "Select extension software" (③).

2 Preparation

2.2 Install this product and extension software



- Do not turn off the camera during installation.
- Do not perform any operation during installation until the installation is completed.
- Extension software is included in the zip file from which you downloaded this product; please use the software in the zip file.
- Please unzip the zip file and use it.

3 Basic settings

3.1 Configure this product

This section describes the procedure for setting up an AI processing relay application from the state of [2 Preparation](#).

- [3.1.1 In case of using an i-PRO camera for a non-AI camera](#)
- [3.1.2 In case of using a camera made by other company for a non-AI camera](#)

3.1.1 In case of using an i-PRO camera for a non-AI camera

(1) Configure settings for non-AI cameras.

Configure settings for non-AI cameras to be linked with this product. Please refer to the camera manuals for the camera settings. Set the following information for the camera.

Click on iCT [Configure Camera].

Left menu > [Basic]

- [Image Rotation]: 0 or 180 degrees

Left menu > [Image] > [JPEG]

- [Refresh Interval]
- [JPEG(1) Resolution]

left menu > [Image] > [Stream(1)]

- [Stream(1) Frame Rate]
- [Stream(1) Max Bit rate]

Then, configure this product.



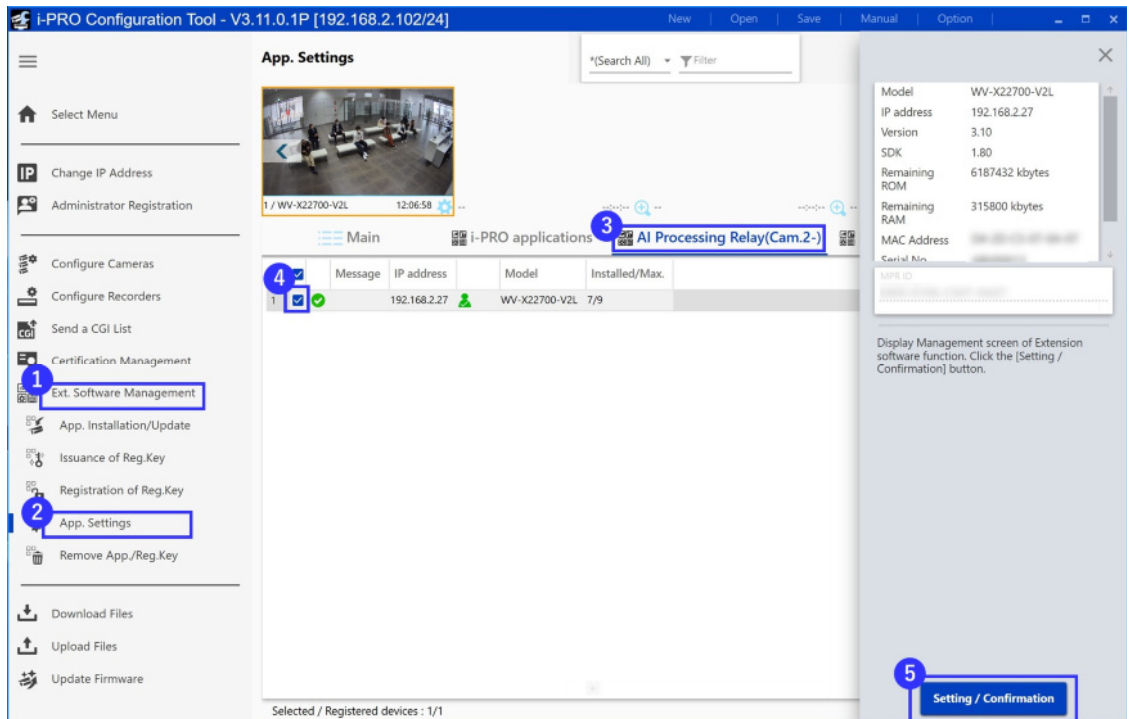
The following settings can also be configured from iCT: follow the steps after “Displays the configuration screen for iCT’s extension software.” in [3.1.2 In case of using a camera made by other company for a non-AI camera](#).

- (2) Displays the configuration screen for iCT’s extension software.
- ① Start iCT and click on “Ext. Software Management” in the menu on the left side.
- ② Click “App. Settings”.

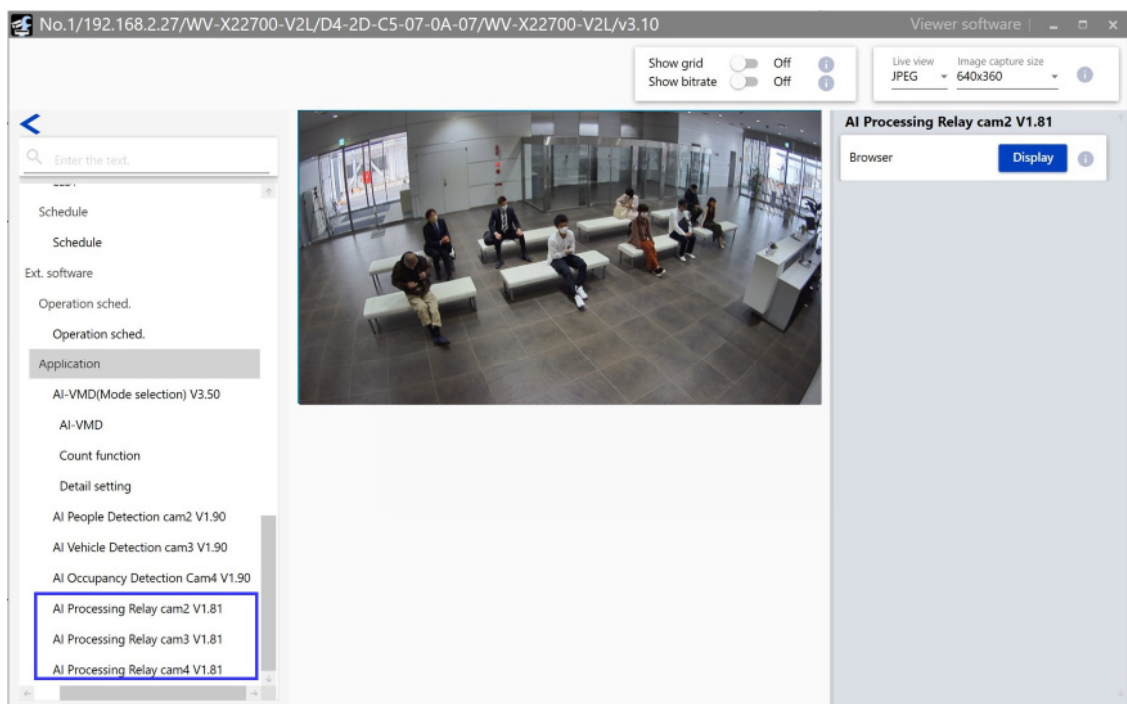
3 Basic settings

3.1 Configure this product

- ③ Click on the tab "AI Processing Relay(Cam.2-)" at the top of the device list.
- ④ Check the cameras for which you want to install the extension software from the device list.
- ⑤ Click "Setting/Confirmation".



- (3) The detailed settings screen of the Extension Software will be displayed. Scroll through the menu on the left to the "AI Processing Relay CamX Vx.xx" item.



3 Basic settings

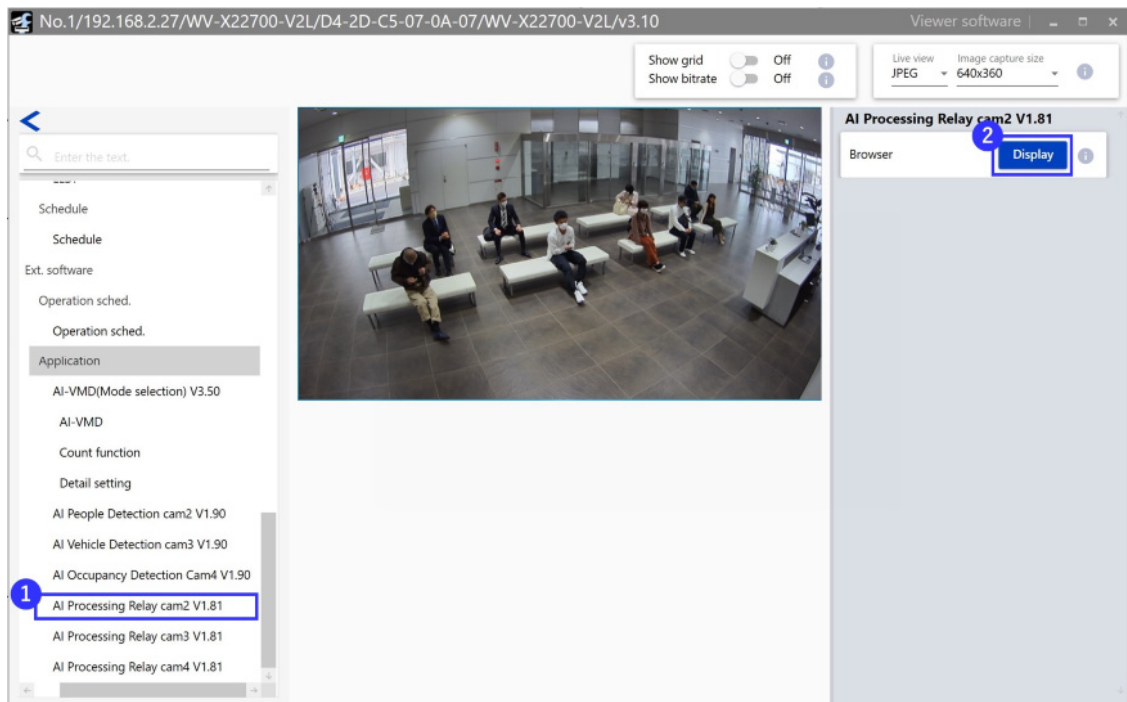
3.1 Configure this product

In the following descriptions, the settings for AI Processing Relay cam2 are described. Please set the setting items according to your environment.

(4) Displays the browser settings screen.

① Click "AI Processing Relay cam2 Vx.xx" from the left side menu of iCT's detailed settings screen.

② Click the "Display" button on the right side menu.



(5) Enter information for a non-AI camera.

3 Basic settings

3.1 Configure this product

Non-AI camera information Cam2	
Non-AI camera user name	<input type="text" value="xxxxxx"/>
Non-AI camera password	<input type="password" value="*****"/>
Protocol	<input type="text" value="HTTP"/>
Non-AI camera IP Address	<input type="text" value="192.168.2.110"/>
Non-AI camera port number	<input type="text" value="80"/>
Stream URL	<input type="text" value="cgi-bin/mjpeg?stream=1"/>
Multi-directional cameras No.	<input type="text" value="1"/>
When you press the "Set" button, you may be asked to authenticate. When an alert is displayed, enter the "Non-AI camera user name" and "Non-AI camera password" for the Non-AI camera and sign in.	
<input type="button" value="Set"/>	
Result	
Stream full URL	-
Received Image	No image
Resolution	-
Framerate	-

[Click here for OSS information.](#)

- **Non-AI camera username**
Enter the username that has been set for the non-AI camera.
Default setting: blank
- **Non-AI camera password**
Enter the camera password that has been set for the non-AI camera.
Default setting: blank
- **Protocol**
Select the protocol used to access the non-AI camera from this product.
Default setting: HTTP
- **Non-AI camera IP address**
Enter the IP address assigned to the non-AI camera.
Default setting: blank
- **Non-AI camera port number**
Enter the port number of the protocol to be used for the non-AI camera.
Default setting: blank
- **Stream URL**
Enter the command to receive video streaming data from the non-AI camera.
Enter the command after the IP address of the camera.

3 Basic settings

3.1 Configure this product

Do not enter a leading "/". The leading "/" will be automatically completed by this product.
In the case of a multi-sensor camera, please include the channel specification in the command.
Default setting: blank

Example: i-PRO camera (single-lens camera)

```
cgi-bin/mjpeg?stream=1&framerate=5
```

– **Multi-directional cameras No.**

If the non-AI camera is a multi-sensor camera, enter the camera number of the multi-sensor camera. If the non-AI camera is a monocular camera, enter 1. The information entered in this field is used when connecting to the i-PRO Active Guard.

Default setting: 1



- Enter the information for a non-AI camera, not the information for the new X series cameras, in the settings section of this product.


- (6) Click the "Set" button
- (7) An alert will appear asking you to enter a username and password. Enter the username and password for a non-AI camera and click the "Sign in" button.

Sign in
http://192.168.0.198
Your connection to this site is not private
Username
Password
Sign in Cancel

- (8) Confirm that the non-AI camera video is displayed in Result > Received Image. The resolution and frame rate of the video actually received will be displayed in the "Resolution" and "Framerate" fields.

3 Basic settings

3.1 Configure this product

Non-AI camera information Cam2	
Non-AI camera user name	<input type="text" value="xxxxx"/>
Non-AI camera password	<input type="password" value="*****"/>
Protocol	<input type="text" value="HTTP"/>
Non-AI camera IP Address	<input type="text" value="192.168.2.110"/>
Non-AI camera port number	<input type="text" value="80"/>
Stream URL	<input type="text" value="cgi-bin/mjpeg?stream=1"/>
Multi-directional cameras No.	<input type="text" value="1"/>
When you press the "Set" button, you may be asked to authenticate. When an alert is displayed, enter the "Non-AI camera user name" and "Non-AI camera password" for the Non-AI camera and sign in.	
<input type="button" value="Set"/>	
Result	
Stream full URL	<input type="text" value="http://192.168.2.110:80/cgi-bin/mjpeg?stream=1"/>
Received Image	
Resolution	<input type="text" value="1920x1080"/>
Framerate	<input type="text" value="5.0"/>

[Click here for OSS information.](#)

Follow the same procedure for AI Processing Relay Cam3 and AI Processing Relay Cam4.

Do not close this browser window until you have completed the settings for [3.2 Configure extension software that work with this product.](#)

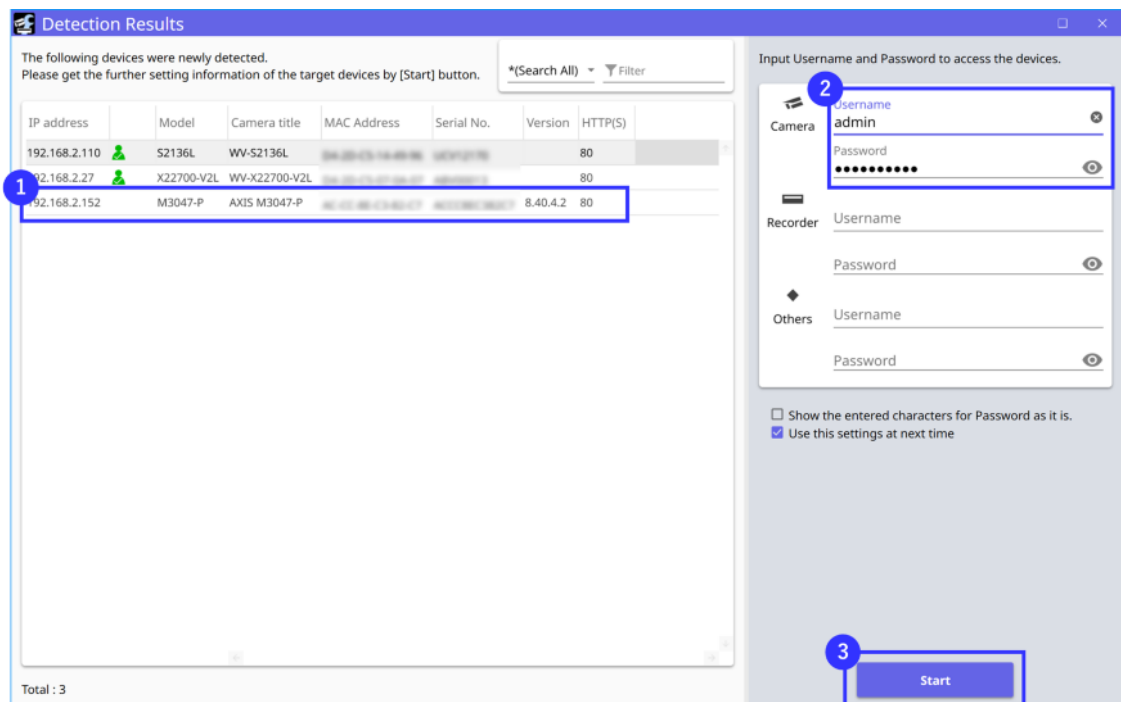
3.1.2 In case of using a camera made by other company for a non-AI camera

(1) Register a camera made by other company in iCT

Register a camera from another manufacturer to iCT. After starting iCT, the device search screen is displayed.

3 Basic settings

3.1 Configure this product



- ① Confirm that the camera from other companies is detected. If not, skip steps (1) and (2) and follow step (3).
- ② Enter the [Username] and [Password] of the camera. If a camera made by other company has a different [User Name] and [Password] from that of the i-PRO camera, enter the [User Name] and [Password] of the i-PRO camera. To authenticate a camera made by other companies, please execute "(2) Authenticate cameras made by other company".
- ③ Click the [Start] button.

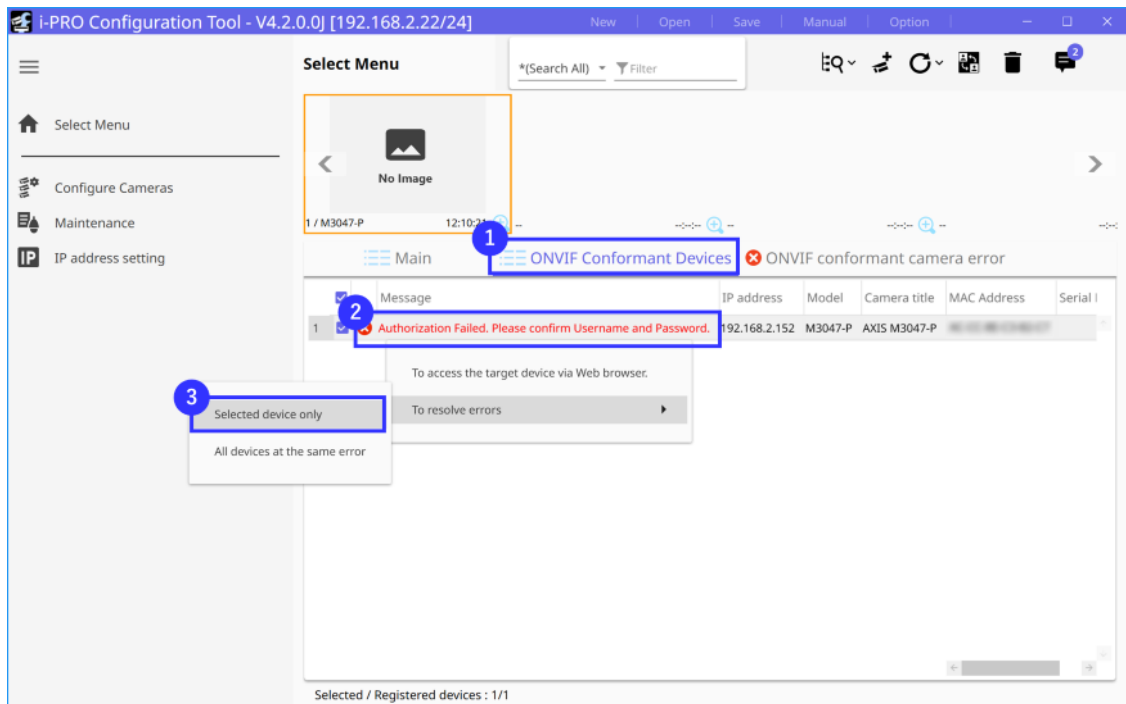


- Cameras made by other company which cannot be registered to iCT by the ①, set them manually by the procedure (5).

- (2) Authenticate cameras made by other company

3 Basic settings

3.1 Configure this product



- ① Click [ONVIF Conformant Devices] tab on the iCT configuration screen
- ② Select the camera that failed authentication, right-click to open the submenu, and click [To resolve errors] > [Selected device only].
- ③ On the next screen, set the [Username] and [Password] for the camera made by other company.

For cameras made by other company that support ONVIF Profile S, iCT may create a profile for the camera made by other company. iCT will create a profile with the following profile name.

IPRO_MPROF_JPEG

– Profile for MJPEG(RTSP) video distribution.

IPRO_MPROF_H264

– This profile is for H.264(RTSP) video distribution.

Note: iCT does not create H.265 profiles. If you want to use H.265 for non-AI camera streams, create an H.265 profile for the non-AI camera. Please refer to the camera manual for details on how to configure non-AI cameras.



If iCT cannot create a profile for a non-AI camera made by other company, it may not be possible to register the camera in iCT. If the number of profiles for a non-AI camera has reached the limit, the profile must be deleted from the non-AI camera.

- (3) Configure settings for cameras made by other company

3 Basic settings

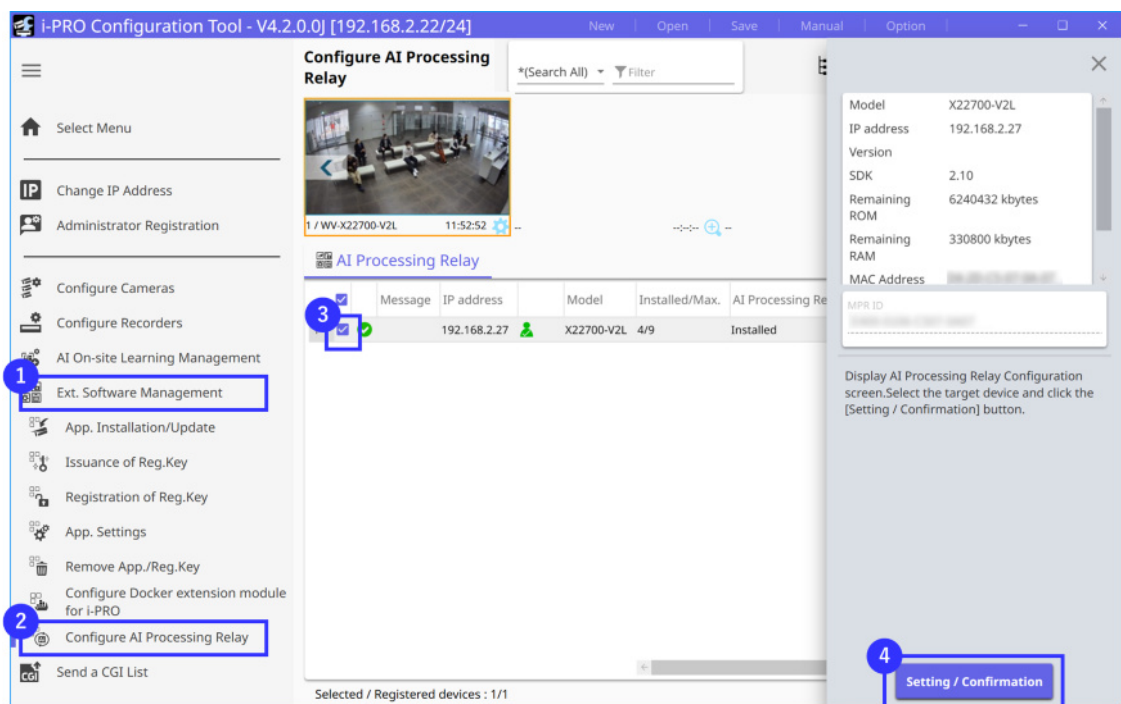
3.1 Configure this product

Configure the following items for the profile used for the AI Processing Relay. Refer to the camera's manual for the settings for non-AI cameras.

- Video codec
- Resolution
- Frame rate
- Bit rate
- Image rotation: 0 degrees or 180 degrees

Then, configure this product.

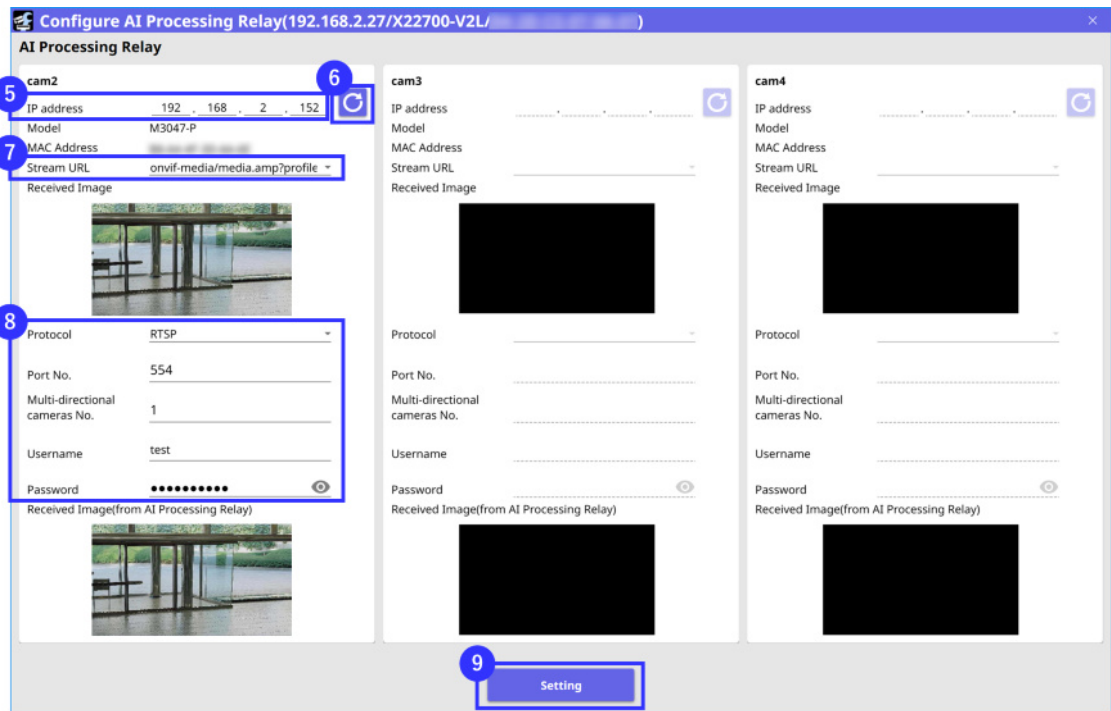
- (4) Displays the configuration screen for iCT's extension software.



- ① Open iCT and click on [Ext. Software Management] in the left menu.
- ② Click [Configure AI Processing Relay].
- ③ Check the cameras for which you want to configure extension software from the list of devices.
- ④ Click the [Setting/Confirmation] button.
- ⑤ Configure AI Processing Relay settings. cam2, cam3, and cma4 are supported by AI Processing Relay Cam2, AI Processing Relay Cam3, and AI Processing Relay Cam4.

3 Basic settings

3.1 Configure this product



① Enter the IP address of the non-AI camera.

– **IP address**

Enter the IP address assigned to the non-AI camera.

Default setting: blank

⑥ Click the Refresh button.

After a few moments, the [Received Image] will show the non-AI camera image acquired by iCT.

– **Model**

Model name of the non-AI camera. If iCT is able to obtain a Model from a non-AI camera, it will be automatically populated.

– **MAC address**

MAC address of non-AI camera. If iCT is able to obtain the MAC address from a non-AI camera, it will be automatically populated.



The image may not be displayed in the [Received Image] section. In this case, please follow the procedure below to set up the AI Processing Relay.

⑦ Set the stream URL.

– **Stream URL**

Enter the stream URL to retrieve the video data from the non-AI camera.

If the stream URL is displayed

- The stream URL obtained by iCT is displayed. Select the stream URL set in (2) of this chapter from the combo box.

If the stream URL is blank

- Enter the command after the IP address of the camera.
- Do not enter a leading “/”. The leading “/” will be automatically completed by this product.
- In the case of a multi-sensor camera, please include the camera number in the command.

Example: If the non-AI camera is an AXIS camera (single-lens camera)

```
onvif-media/media.amp?profile=IPRO_MPROF_
JPEG&sessiontimeout=60&streamtype=unicast
```

- ⑧ Set other items. iCT will display the value obtained by iCT if a non-AI camera can be registered to iCT.

- **Protocol**

Select the protocol to be used to access non-AI cameras from the product. iCT will automatically populate this field if it is able to obtain the Protocol from a non-AI camera.

- **Port No.**

Enter the port number of the protocol used by the non-AI camera. iCT will automatically enter the port number if it is able to obtain it from the non-AI camera.

- **Multi-directional cameras No.**

If the non-AI camera is a multi-sensor camera, enter the camera number of the multi-sensor camera. If the non-AI camera is a monocular camera, enter 1. The information entered in this field is used when connecting to the Multi AI software.

Default setting: blank

- **Username**

Enter the Username that is set for the non-AI camera, which will be automatically populated when the Username for the non-AI camera is entered into iCT.

- **Password**

Enter the password set for the non-AI camera; if you enter the password for a non-AI camera in iCT, it will be automatically entered.

- ⑨ Click the [Setting] button.

After a while, the image received by AI Processing Relay using the entered [Stream URL] will be displayed in [Received Image (from AI Processing Relay)].

3 Basic settings

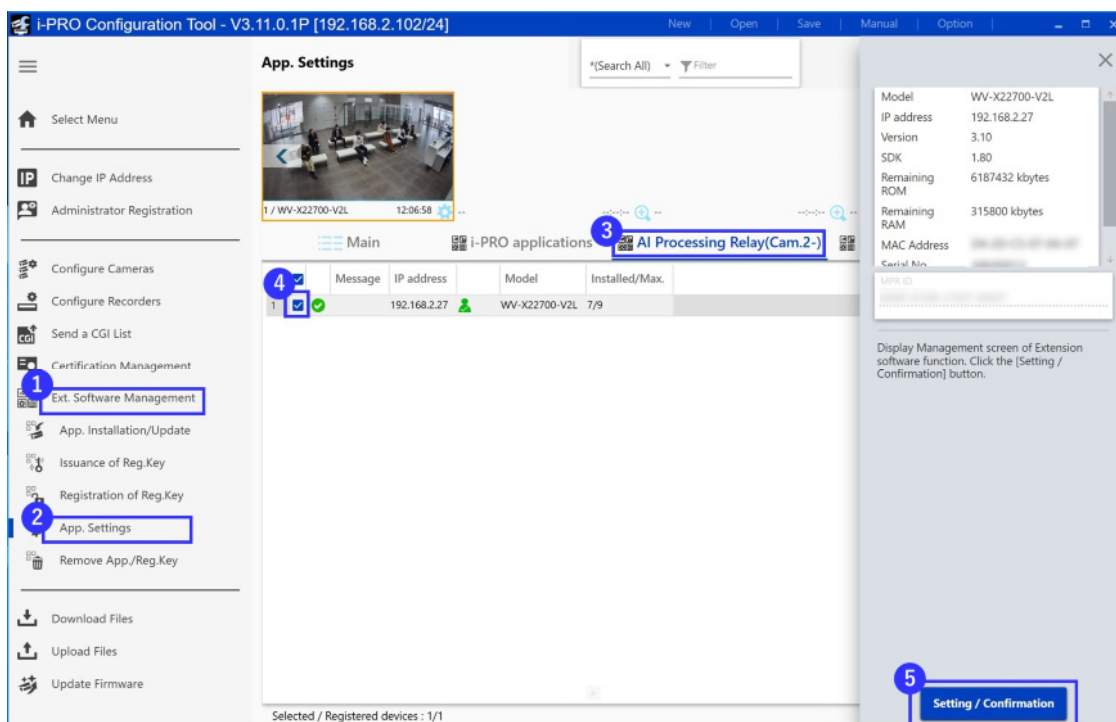
3.2 Configure extension software that work with this product



If an image is displayed in the [Received Image (from AI Processing Relay)] section, AI Processing Relay is correctly set even if no image is displayed in the [Received Image] section.

3.2 Configure extension software that work with this product

1. Displays the configuration screen for iCT's extension software.
 - ① Start iCT and click on "Ext. Software Management" in the menu on the left side.
 - ② Click "App. Settings".
 - ③ Click on the tab "AI Processing Relay(Cam.2-)" at the top of the device list.
 - ④ Check the cameras for which you want to install the extension software from the device list.
 - ⑤ Click "Setting/Confirmation".



2. The detailed settings screen for the extension software will be displayed. Scroll through the menu on the left to display the extension software items. The following items are displayed in the "Ext. software" section

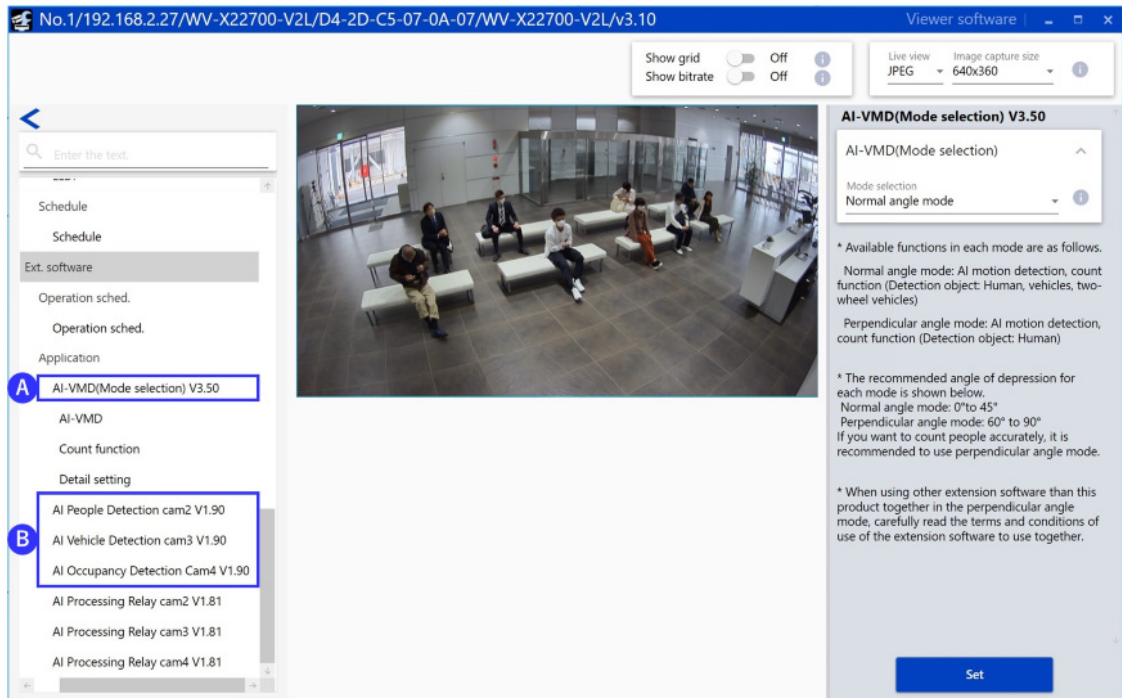
A: Extension software for camera 1

B: Extension software for cameras 2, 3 and 4

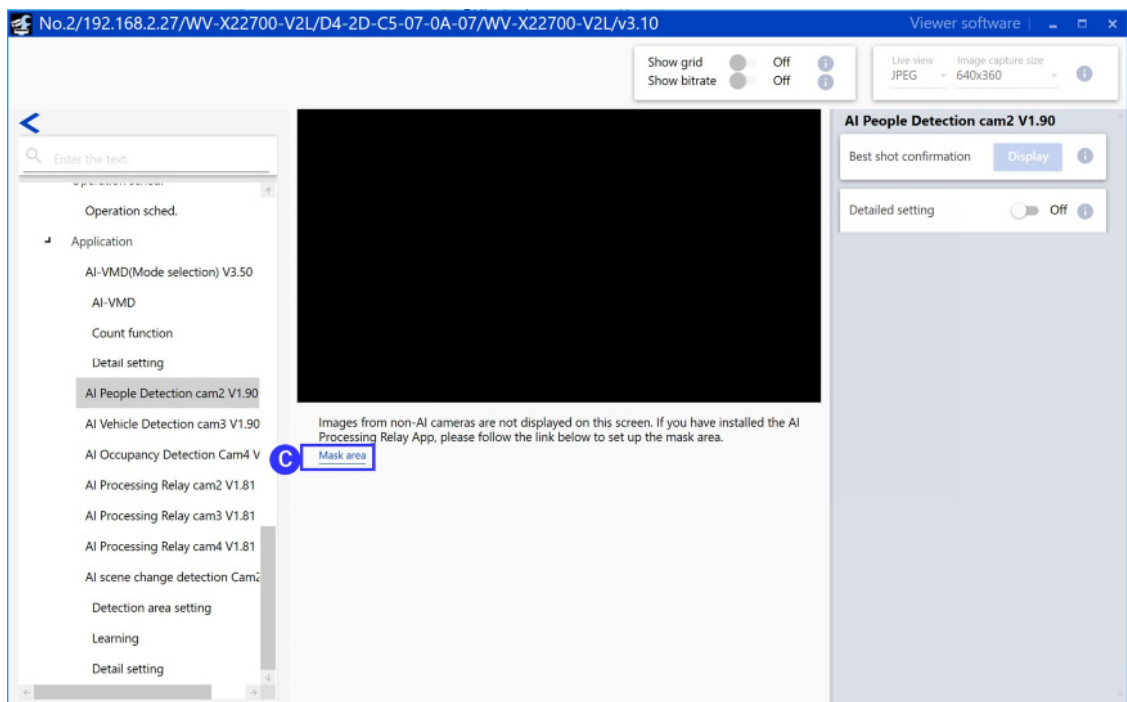
3 Basic settings

3.2 Configure extension software that work with this product

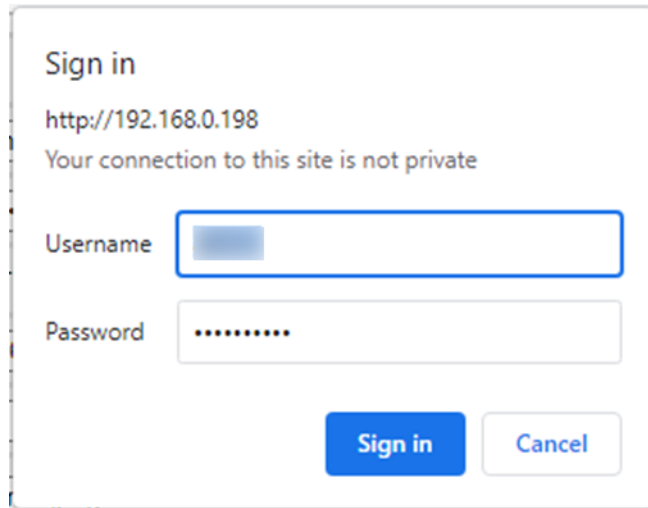
Please refer to the manual of each extension software to set up the software.



The images of non-AI cameras (Camera2, Camera3, and Camera4) are not displayed on the configuration screen of the software for Camera2, 3, and 4. If you need to make settings while viewing the images, click the link (C in the figure below) displayed on the iCT screen and make settings on the browser's settings screen.



An alert may appear when opening the extension software screen. Enter the username and password of the Non-AI camera to the alert. The live image of the Non-AI camera will be displayed on the configuration screen of the extension software.



Live video from non-AI cameras will appear on the browser's settings screen of the extension software.



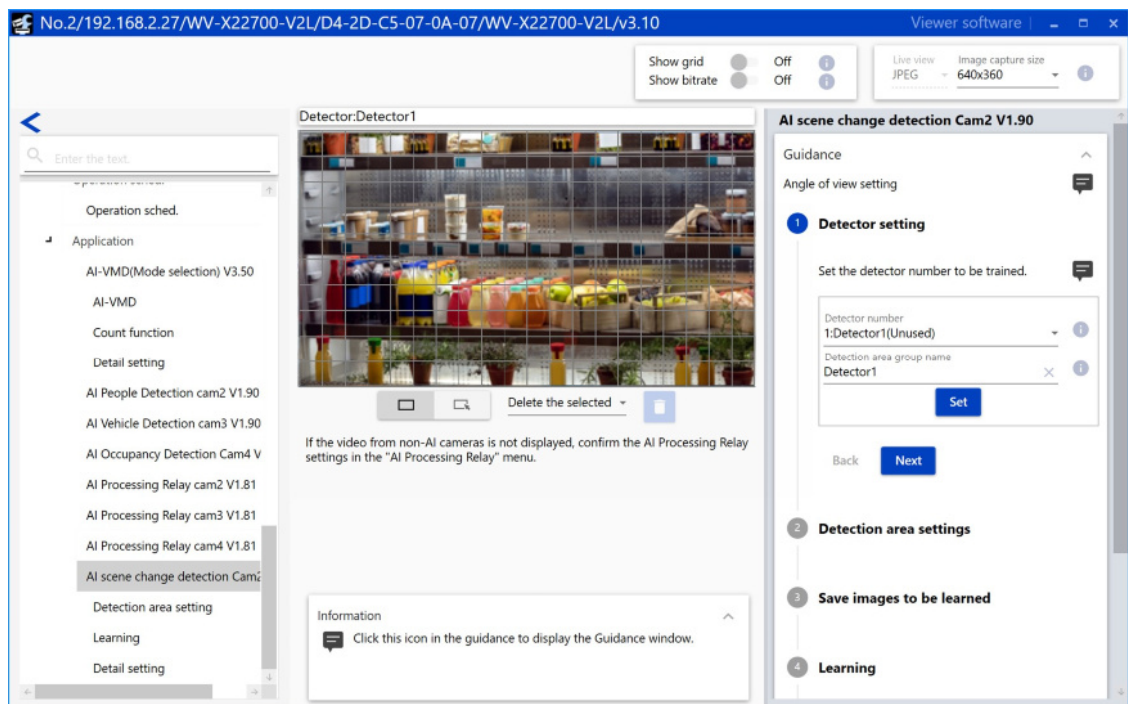
If live images from non-AI cameras do not show up on the browser screen of the extension software, please check the following points

- Make sure that the [Connection] under [Network] > [Advanced] > [HTTPS] on the new X series camera is set to [HTTP & HTTPS]. If you are using the [HTTPS] connection with the new X series cameras, please change the connection between the AI Processing Relay and non-AI cameras to HTTPS.
- Close the setting screen of the extension software. Start the AI Processing Relay setting screen from the [AI Processing Relay camX] setting screen of iCT and confirm that the images from non-AI cameras are displayed. Without closing the AI Processing Relay settings window, open other extension software settings window again.

For the AI Scene change detection application, the video from non-AI cameras Camera2, Camera3, and Camera4 will appear on the iCT configuration screen. If the images are not displayed, please configure the AI processing relay settings.

3 Basic settings

3.3 Configure i-PRO Active Guard



- The username and password for the alert must be the username and password of the camera to be linked, not the username and password of the new X series camera.
- AI-VMD Mode selection should be set to "Normal angle mode".
- iCT does not display the live image of Non-AI camera.
C : Please set the area settings, etc. from the link displayed in iCT.
- "Detailed setting" > "AI-VMD Information addition" in the AI-VMD application is set to Off.
- When the extension software is used with an AI processing relay application, the frame information of the detection results will not be displayed on the camera's live screen or in the iCT.
- The schedule settings for Camera 1 to Camera 4 of the AI Processing relay application and the linked extension software should always be set to On.
- It is recommended that the "Alarm" > "Camera action on alarm" setting item in the new X series cameras be set to Off.

3.3 Configure i-PRO Active Guard

Refer to the i-PRO Active Guard manual for i-PRO Active Guard settings. Below we describe how

3 Basic settings

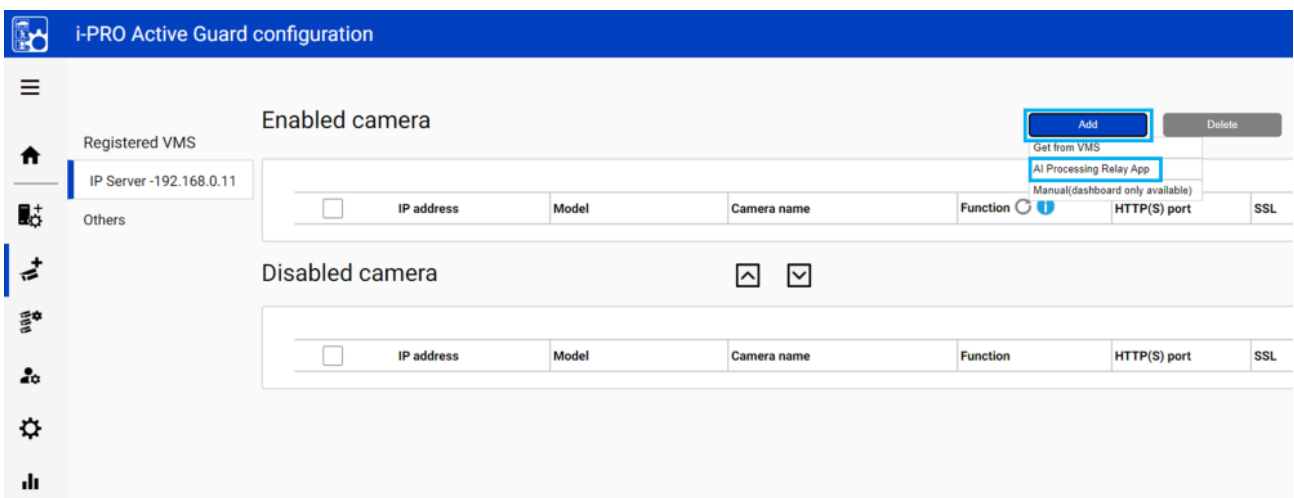
3.3 Configure i-PRO Active Guard

to register the extension software that works with the AI processing relay application to the i-PRO Active Guard.

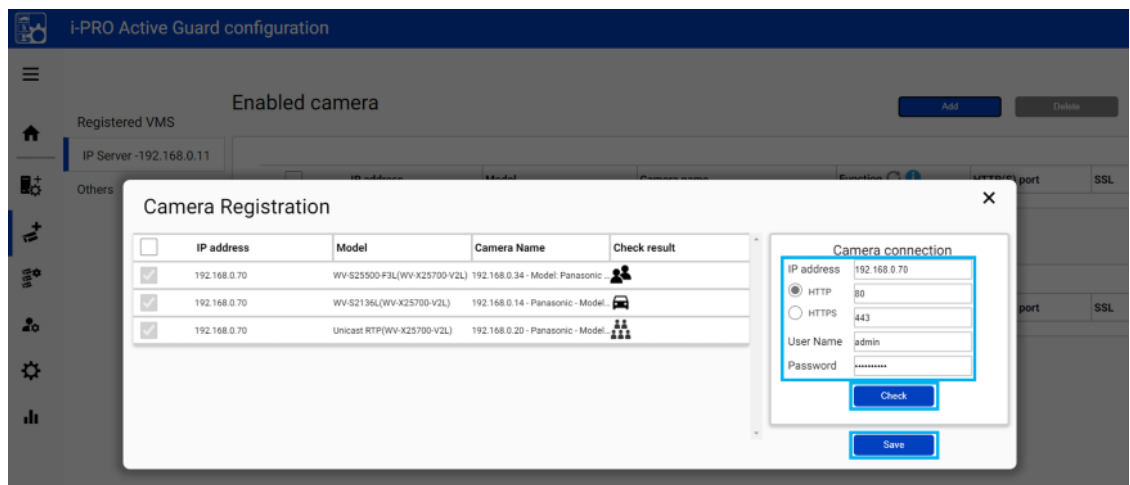


- In order for i-PRO Active Guard for WV-ASM300 to display images from non-AI cameras, the MAC address of the non-AI camera must be set in the AI Processing Relay. Enter the MAC address of the non-AI camera in [3.1.2](#) [In case of using a camera made by other company for a non-AI camera.](#)

1. Click "Camera Registration".
2. Select "Add" - "AI Processing Relay App".



3. Enter the IP address and authentication information for the new X series camera, and click "Check". Confirm that the non-AI camera appears in the list and click "Save".



4. Click "Restart" to restart the i-PRO Active Guard server.

3 Basic settings

3.4 Configure i-PRO Active Guard for VMS to receive AI-VMD and AI Occupancy Detection alarms

<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
<input type="checkbox"/>	192.168.0.70	WV-S2136L(WV-X25700-V2L)	192.168.0.14 - Panasonic - Model: S21...		80	Off
<input type="checkbox"/>	192.168.0.70	WV-S25500-F3L(WV-X25700-...)	192.168.0.34 - Model: Panasonic / i-PR...		80	Off
<input type="checkbox"/>	192.168.0.70	UnicastRTP(WV-X25700-V2L)	192.168.0.20 - Panasonic - Model: X25...		80	Off



The following settings must be made in advance.

- [3.1 Configure this product](#)
- Register non-AI cameras to video surveillance software

3.4 Configure i-PRO Active Guard for VMS to receive AI-VMD and AI Occupancy Detection alarms

If you use Genetec / Milestone VMS, you need to configure the following settings to notify alarms. i-PRO Active Guard will notify Genetec / Milestone VMS of the AI-VMD and AI Occupancy Detection alarms by making the following settings. If you use Video Insight VMS, you do not need the following settings.

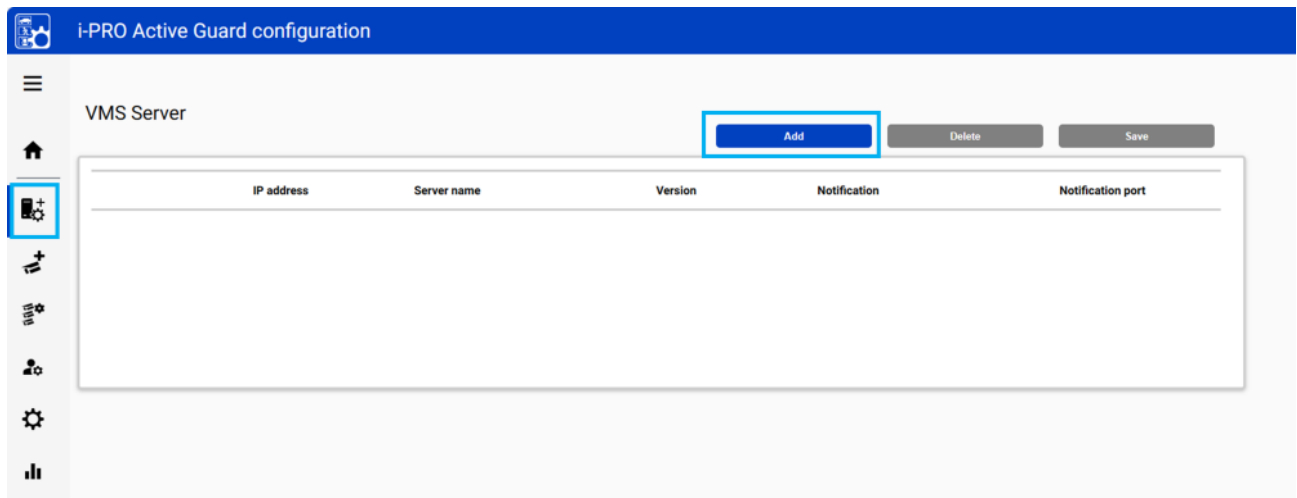


- When using Genetec / Milestone with i-PRO Active Guard / WV-ASM300W with i-PRO Active Guard, please use the new X series camera with "Alarm" > "Notification" > "TCP alarm notification" turned off.

1. Open i-PRO Active Guard's VMS server screen and press the "Add" button.

3 Basic settings

3.4 Configure i-PRO Active Guard for VMS to receive AI-VMD and AI Occupancy Detection alarms



2. Press the "Test" button after entering the VMS information. When "Success" is displayed, press the "Save" button.

The screenshot shows a configuration dialog box for a VMS server. The fields are as follows:

- Type: Genetec Security Center 5.10.1 or later
- IP address: 192.168.1.100
- WEB API Port: 8080
- SSL: Off
- User Name: admin
- Password:

The 'Test' button is highlighted, and the text 'Succeeded' is displayed below it. The 'Save' button is also visible.

- **Type**
Select Genetec Security Center or Milestone XProtect.
- **IP address**
Enter the IP address of Genetec Security Center or Milestone XProtect.
- **WEB API Port**

3 Basic settings

3.4 Configure i-PRO Active Guard for VMS to receive AI-VMD and AI Occupancy Detection alarms

Enter the port number of the Genetec Security Center or Milestone XProtect.

- **Notification Port (Milestone XProtect only)**

Enter the Milestone XProtect notification port number.

- **SSL**

Select On to enable SSL connection or Off to disable SSL connection.

- **User Name**

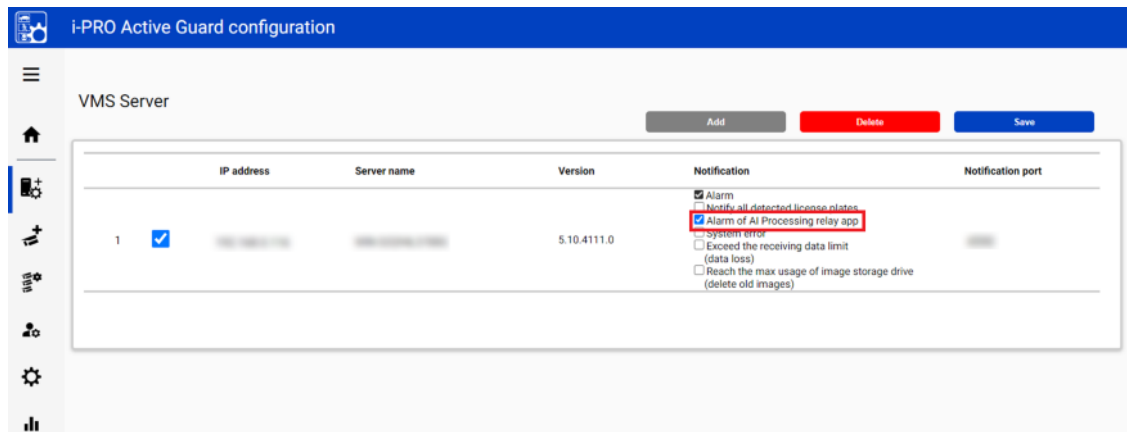
Enter the User Name for Genetec Security Center or Milestone XProtect.

- **Password**

Enter your Genetec Security Center or Milestone XProtect password.

3. The configured VMS appears on the VMS Server screen.

4. Check the Alarm of AI Processing relay app in the Notification column. i-PRO Active Guard will notify VMS of AI-VMD and AI Occupancy Detection alarms.



4 Other

4.1 Specifications

4.1.1 Required environment and PC specifications

We recommend using a display capable of 1920x1080 resolution as the environment for setting up this product. Please read the manuals for the new X series cameras and non-AI cameras for the specifications of the PC used for camera setup.

4.1.2 About this product

Items		Contents
Input		3ch
No. of ext. software to be installed		Up to 3 ext. software
Supported camera		<ul style="list-style-type: none">- i-PRO camera- Other Company Camera (*1)
Received video format	Video format	JPEG, H.264, H.265 (*2)
	Resolution	<ul style="list-style-type: none">- Recommended resolution: 2MP(1920x1080) or 1MP(1280x720)- Max. resolution: 1920x1080- Min. resolution: 640x360
Available ext. software		<ul style="list-style-type: none">- AI-VMD (AI Video Motion Detection)- AI People detection- AI Vehicle detection- AI Occupancy detection- AI Scene change detection <p>Note : The AI analysis performance depends on the image quality, so it will be a best effort. Please check it with cameras you use on site.</p>
Supported systems		Video Insight / Genetec / Milestone / i-PRO Active Guard for WV-ASM300

(*1): Non-AI cameras must meet the “Received video format” requirement. Also, a command to get MJPEG/RTSP stream is required.

(*2):

In the case of JPEG:

- The frame rate of the connected non-AI cameras must be 3-15fps(Recommended frame rate 5fps).

In the case of H.264:

- The total frame rate of the connected non-AI cameras must be within 15fps and the total bitrate must be within 3Mbps.
- Example:
 - When connecting 3 non-AI cameras with X series camera: within 5fps and 1Mbps per channel.
 - When connecting 2 non-AI cameras with X series camera: within 7.5fps and 1.5Mbps per channel.
 - When connecting 1 non-AI camera with X series camera: within 15fps and 3Mbps.
- The frame rate of the connected non-AI cameras must be 3-15fps(Recommended frame rate 5fps).

In the case of H.265:

- The frame rate of non-AI cameras must be within 10fps and bitrate must be within 1Mbps.
- The frame rate of the connected non-AI cameras must be 3-10fps(Recommended frame rate 5fps).

Table 4.1 In case of using MJPEG/H.264 for non-AI cameras

Number of non-AI cameras	Number of workable app for new X series camera (*3)	AI-VMD	AI People Detection	AI Vehicle Detection	AI Occupancy Detection	AI Scene Change Detection (*4)
3	1 (1)	Up to 1 app per each non-AI camera				
2	2 (1)	Up to 2 app per each non-AI camera				
1	3 (2)	Up to 3 app per each non-AI camera				

Table 4.2 In case of using H.265 for non-AI cameras

Number of non-AI cameras	Number of workable app for new X series camera	AI-VMD	AI People Detection	AI Vehicle Detection	AI Occupancy Detection	AI Scene Change Detection (*4)
1	Up to 3 applications can be used in total					

(*3): Figures in parentheses indicate the number of extension software when using the 6MP model or 8MP model of the new X series camera.

(*4): AI Scene Change Detection is only available for one of the new X cameras and one of the non-AI cameras.



- Please refer to the following web page for information on compatible models and software versions of this product.
→ [Technical Information](#) [Control number: C0103]
- For information on combinations of extension software that can be used at the same time, please refer to the following web page.
→ [Accessory Selector](#)



- For "Video Insight with i-PRO Active Guard", AI Occupancy Detection alarms are not supported because they do not go through i-PRO Active Guard.
- For "ASM300W with i-PRO Active Guard" supports only i-PRO cameras.
- When using Genetec / Milestone with i-PRO Active Guard / WV-ASM300W with i-PRO Active Guard, please use the new X series camera with "Alarm" > "Notification" > "TCP alarm notification" turned off.

Supported functions with AI Processing Relay for each system

Video Insight with i-PRO Active Guard

	AI-VMD	AI People Detection	AI Vehicle Detection	AI Occupancy Detection	AI Scene Chage Detection
Alarm Management	✓	✓	✓	N/A	✓
Similarity Search	-	✓	✓	-	-
Statistics dashboard	✓	✓	✓	✓	-

Genetec / Milestone with i-PRO Active Guard

	AI-VMD	AI People Detection	AI Vehicle Detection	AI Occupancy Detection	AI Scene Change Detection
Alarm Management	✓	✓	✓	✓	✓
Similarity Search	-	✓	✓	-	-
Statistics dashboard	✓	✓	✓	✓	-

WV-ASM300W with i-PRO Active Guard (only i-PRO Camera is supported)

	AI-VMD	AI People Detection	AI Vehicle Detection	AI Occupancy Detection	AI Scene Change Detection
Alarm Management	✓	✓	✓	✓	✓
Similarity Search	-	✓	✓	-	-
Statistics dashboard	✓	✓	✓	✓	-

4.1.3 Combination of this product and compatible software

This product must be used in combination with the corresponding AI software. AI Scene Change Detection can be installed on up to one of cameras 1 through 4.

Camera	AI Processing Relay software file name	Supported extension software file name
New X Series camera: camera1	—	XAE200_vXXX.ext AIPeopleDetection_vXXX.ext AIVehicleDetection_vXXX.ext XAE207_vXXX.ext AISceneChangeDetection_vXXX.ext Other extension software for the new X series cameras
Non-AI camera: camera2	AIProcessingRelay-Cam2_vXXX.ext	XAE200-Cam2_vXXX.ext AIPeopleDetection-Cam2_vXXX.ext AIVehicleDetection-Cam2_vXXX.ext XAE207-Cam2_vXXX.ext AISceneChangeDetection-Cam2_vXXX.ext
Non-AI camera: camera3	AIProcessingRelay-Cam3_vXXX.ext	XAE200-Cam3_vXXX.ext AIPeopleDetection-Cam3_vXXX.ext AIVehicleDetection-Cam3_vXXX.ext XAE207-Cam3_vXXX.ext AISceneChangeDetection-Cam3_vXXX.ext
Non-AI camera: camera4	AIProcessingRelay-Cam4_vXXX.ext	XAE200-Cam4_vXXX.ext AIPeopleDetection-Cam4_vXXX.ext AIVehicleDetection-Cam4_vXXX.ext XAE207-Cam4_vXXX.ext AISceneChangeDetection-Cam4_vXXX.ext

4.1.4 Camera to install this product

The camera this product works with is the new X series camera. Please install and use this product on the new X series cameras.

4.1.5 Automatic acquisition of stream URLs by iCT

iCT acquires stream URLs from non-AI cameras. The following is the status of support for automatic acquisition.

Non-AI Camera	MJPEG	H.264	H.265
Cameras made by i-PRO	✓	✓ (*1)	✓ (*1)
Cameras made by other company	✓ (*2)	✓ (*2)	– (*3)

(*1): The stream URLs for H.264 and H.265 are the same. H.264 and H.265 are switched depending on the settings of the non-AI camera.

(*2): If you cannot get the stream URL in iCT, please enter it manually.

(*3): Enter the RTSP (H.265) stream URL manually.

4.1.6 MJPEG stream URL for non-AI cameras

If iCT cannot automatically get the stream URL from a non-AI camera, the stream URL for the non-AI camera must be manually entered. Examples of MJPEG commands from various companies are shown below. The following commands are not guaranteed to work with all cameras. Please check the operation of your camera before use.

Manufacturer	MJPEG command example (Http Jpeg stream URL)	Full URL (Http jpeg stream full URL)	Camera setting
i-PRO	cgi-bin/mjpeg? stream=1&framerate=5	http://<camera IP> /cgi-bin/mjpeg? stream=1&framerate=5 or https://<camera IP> /cgi-bin/mjpeg? stream=1&framerate=5	Open the Image/Audio > Image settings screen of the i-PRO camera and make the following settings: - Refresh interval (JPEG): 5fps - JPEG(1) > Image capture size: 1920x1080, 1280x720 or 640x360
Advidia	video/mjpeg/stream1	http://<camera IP> /video/mjpeg/stream1	This command is for an advidia camera with stream1 set to MJPEG. The Advidia camera settings should be set to "No Authentication" and the connection from AI Processing Relay should be HTTP. Example: Setup > Security > NetworkSecurity > Authentication > HTTP Authentication = None
AXIS	axis-cgi/mjpg/video.cgi? resolution=1920x1080&fps=5	http://<camera IP> /axis-cgi/mjpg/video.cgi? resolution=1920x1080&fps=5 or https://<camera IP> /axis-cgi/mjpg/video.cgi? resolution=1920x1080&fps=5	

Manufacturer	MJPEG command example (Http Jpeg stream URL)	Full URL (Http jpeg stream full URL)	Camera setting
Hanwha	stw-cgi/video.cgi? msubmenu=stream&action=view&Profile=1&CodecType=MJPEG&Resolution=1920x1080&FrameRate=5	http://<camera IP> /stw-cgi/video.cgi? msubmenu=stream&action=view&Profile=1&CodecType=MJPEG&Resolution=1920x1080&FrameRate=5 or https://<camera IP> /stw-cgi/video.cgi? msubmenu=stream&action=view&Profile=1&CodecType=MJPEG&Resolution=1920x1080&FrameRate=5	This command is used when MJPEG is set as Profile 1 on a Hanwha camera.
VIVOTEK	video1s1.mjpg	http://<camera IP> /video1s1.mjpg or https://<camera IP> /video1s1.mjpg	
Dahua	cgi-bin/mjpg/video.cgi? channel=1&subtype=1	http://<camera IP> /cgi-bin/mjpg/video.cgi? channel=1&subtype=1 or https://<camera IP> /cgi-bin/mjpg/video.cgi? channel=1&subtype=1	If the aspect ratio cannot be set to 16:9, set 4:3.
Hikvision	ISAPI/Streaming/channels/102/httpPreview	http://<camera IP> /ISAPI/Streaming/channels/102/httpPreview or https://<camera IP> /ISAPI/Streaming/channels/102/httpPreview	



- If the frame rate cannot be set to 5 fps in the non-AI camera settings, set the frame rate closest to 5 fps. (The minimum frame rate is 3 fps.)
- If the resolution of a non-AI camera cannot be set to 1920x1080 or 1280x720, set the closest value to 1280x720. (The minimum resolution is 640x360).

4.1.7 JPEG one shot mode

JPEG one shot mode continuously receives JPEG images from a Non-AI camera and performs AI processing on the received images. Although MJPEG is recommended for this product, if your camera does not support MJPEG CGI, try the JPEG one shot mode. Please complete the installation of AI Processing Relay before following the steps below.

- (1) Enter the following CGI to enable JPEG one shot mode

```
http://<camera IP>/cgi-bin/adam.cgi?  
methodName=setApplicationPreference&appName=AiEncoderAppCam2  
&prefType=Integer&prefName=OneShot&value=1
```

camera IP : IP address of the camera where AI Processing Relay is installed

For appName, specify the following parameters to match the AI Processing Relay CamX you have installed.

AI Processing Relay Cam2 : appName=AiEncoderAppCam2

AI Processing Relay Cam3 : appName=AiEncoderAppCam3

AI Processing Relay Cam4 : appName=AiEncoderAppCam4

value=1 : JPEG one shot mode on

value=0 : JPEG one shot mode off (default value)

- (2) Configure AI Processing Relay with reference to [2.2.4 Install extension software for cameras 2, 3, and 4](#).

For "Stream URL", enter the command to receive JPEG one shot.

Example: i-PRO camera (single-lens camera)

```
cgi-bin/camera?stream=1
```

- (3) If an image is displayed in the Result column, the JPEG one shot mode is working.



- AI processing in JPEG one shot mode may not reach the recommended frame rate of 5 fps due to frequent communication with a Non-AI camera.

Examples of JPEG one shot commands from various companies are shown below. The following commands are not guaranteed to work with all cameras. Please check the operation of your camera before use.

Manufacturer	MJPEG command example (Http Jpeg stream URL)	Full URL (Http jpeg stream full URL)	Camera setting
Bosch	snap.jpg	http://<camera IP>/snap.jpg or https://<camera IP>/snap.jpg	
Avigilon	media/cam0/still.jpg? res=max	http://<camera IP>/media/cam0/still.jpg? res=max or https://<camera IP>/media/cam0/still.jpg? res=max	

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Software name	License Name
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