



Setup Instructions

i-PRO Active Guard for WV-ASM300



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1. Preface

1.1. Limitation of liability

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- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

1.4. Abbreviations

These are descriptions of the basic terms used in these operating instructions.

Microsoft® Windows® are described as Windows.

1.5. Disclaimer of warranty

This product is designed to search/verify a specified face from database that stores face information and thumbnail images created based on faces captured by network cameras, and display statistical information by operation using a client terminal or system compatible with this product. This product by itself is not designed for crime prevention. Our company accepts no responsibility for the following under any circumstances.

- (1) ANY DAMAGE AND LOSS, INCLUDING WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, CONSEQUENTIAL OR EXEMPLARY, ARISING OUT OF OR RELATING TO THE PRODUCT.
- (2) ANY INCONVENIENCE, LOSS, OR DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER.
- (3) UNAUTHORIZED DISASSEMBLE, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER.
- (4) ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY.
- (5) ANY CLAIM OR ACTION FOR DAMAGES BROUGHT BY ANY PERSON OR ORGANIZATION AS A PHOTOGRAPHED SUBJECT DUE TO VIOLATION OF PRIVACY CONCERNING A SURVEILLANCE CAMERA'S PICTURE OR SAVED DATA, FOR SOME REASON (INCLUDING USE WHEN USER AUTHENTICATION ON THE AUTHENTICATION SETTING SCREEN IS SET TO OFF), BECOMING PUBLIC OR BEING USED FOR ANY PURPOSE.
- (6) LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE (INCLUDING INITIALIZATION OF THE PRODUCT DUE TO FORGOTTEN AUTHENTICATION INFORMATION SUCH AS A USERNAME AND PASSWORD).
- (7) ANY PROBLEM, DAMAGE OR COMPLAINT CAUSED BY THE OPERATION BY A MALICIOUS THIRD PARTY.

1.6. Collection of Usage Data

This software may collect data about utilization of this software and send it to i-PRO Co., Ltd. In particular, we use this data to improve our products and services. You can stop this data collection by unchecking "Send anonymous data to improve software and user experience," checkbox.

The following is an example of the data collected by this software. We do not collect data about your personal information.

- Company name, Country and Purpose of use entered by user.
- The number of camera and camera's extension software.

1.7. Network security

As you will use this product connected to a network, your attention is called to the following security risks.

1. Leakage or theft of information through this product
2. Use of this product for illegal operations by persons with malicious intent
3. Interference with or stoppage of this product by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this product in a network secured by a firewall, etc.
- If this product is connected to a network that includes PCs, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated anti-virus program, anti-spyware program, etc.).
- Protect your network against unauthorized access by restricting users to those who log in with an authorized username and password set by using user authentication.
- After the product is accessed by the administrator, make sure to close the web browser.
- Change the administrator password periodically. Keep the authentication information (your username and password) in a safe place free from public view.
- Apply measures such as user authentication to protect your network against leakage or theft of information, including image data, authentication information (user names and passwords), alarm mail information and FTP server information.
- Use a password that has never been used to protect your network from information leakage or theft.

1.8. Precaution for use

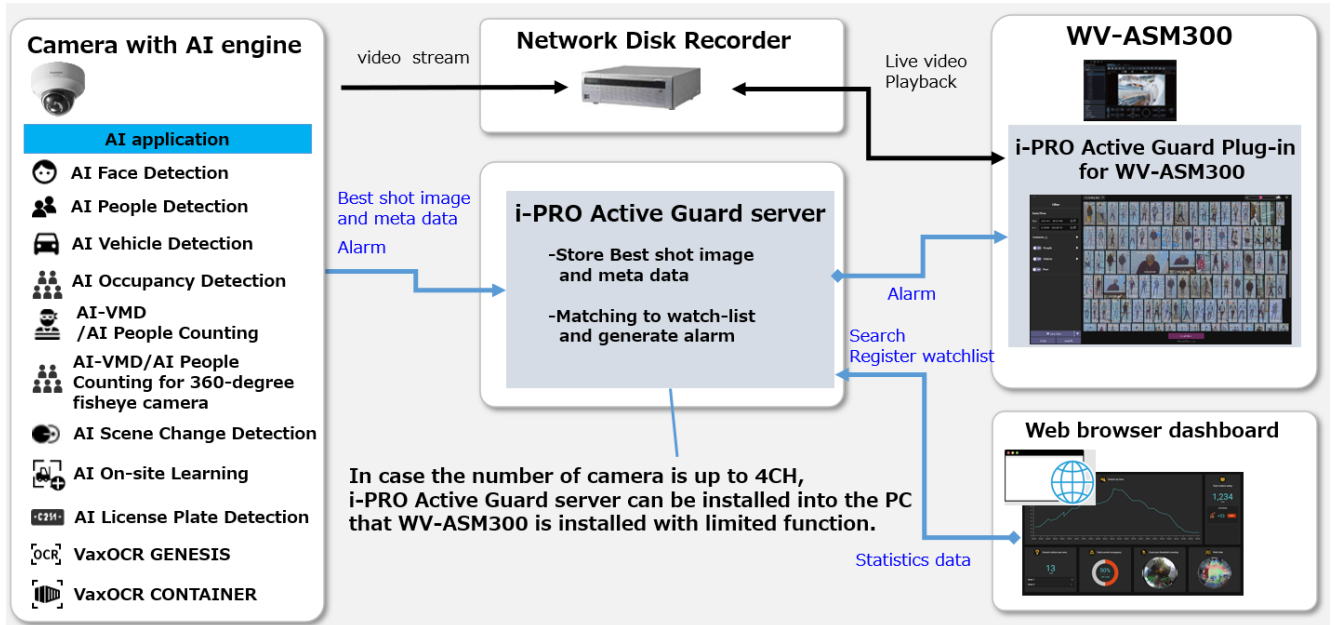
- The administrator should properly manage authentication information such as cameras, recorders, client software, Windows, databases, etc. so as not to leak to third parties.
- Always change passwords for cameras, recorders, client software, etc. from the default values, and perform appropriate management.
- Apply authentication information for each user, and do not share.
- Set the access privileges of the user appropriately.
- Make sure to manage login properly using auto logout function etc. so that third parties do not operate unintentionally by leaving it logged in.
- When downloading the application, please download from the official site.
- The administrator should properly manage exported data using export function so that there is no leakage to third parties.
- When repairing, disposing of, or transferring PC, there is a possibility that information may be left on the HDD etc. Therefore, please manage by an appropriate method such as physically destroying the HDD. Also, if using external media, remove them in advance and manage them so that they do not leak to third parties.
- If the authentication information is lost, system needs to be initialized. Store the authentication information properly in a place where only authorized persons can view it.
- It is recommended to back up and manage system configuration data regularly.
- Set the time for devices in the system, such as cameras, recorders, and PCs, using an NTP server, etc.
- Please properly manage the expiration date of the server certificate prepared by the customer.
- For Windows, apply the latest security patch. Also, please set up Windows properly according to your environment.
- Databases can be corrupted by forced shutdowns / power outages or system outages / system crashes due to power interruptions.

In that case, following phenomenon may occur. i-PRO Active Guard server software will not start, functions such as search, alarm notification, or watch registration will not work.

Damaged data cannot be recovered, so it is highly recommended to install a UPS in case of power failure.

2. Introduction to i-PRO Active Guard

2.1. System overview



AI application or AI function on cameras transmit video stream to Network disk recorder 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 or vehicle, LPR, OCR or Container is matched to watchlist.

i-PRO Active Guard Plug-in for ASM300 (hereinafter referred to as "plug-in") which is the plug-in software for WV-ASM300 can search best shot images, register watchlist, show live video, recorded video, and alarm.

By visualizing statistics data from AI application on the web browser, it can also be used for business intelligence.

2.2. Software components and supported version

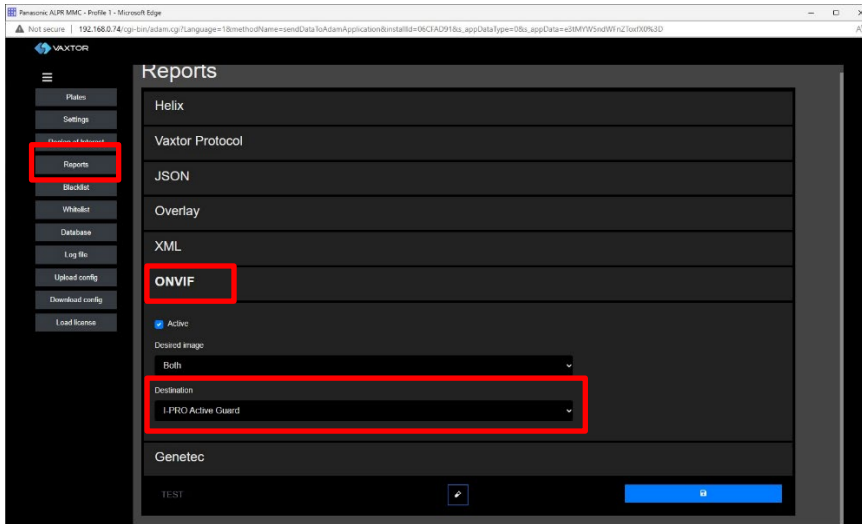
Camera's AI function

- AI Face Detection: Camera's extension software. V1.11 or later is supported.
 - V2.10 or later is required for area-specific search (Region of interest) in Plug-in.
- AI People Detection: Camera's extension software. V1.11 or later is supported.
 - V1.40 or later is required for to use the automatic detection of people attributes from images.
 - V2.10 or later is required for area-specific search (Region of interest) in Plug-in.
- AI Vehicle Detection: Camera's extension software. V1.11 or later is supported.
 - V1.40 or later is required for to use the automatic detection of vehicle attributes from images.
 - V2.10 or later is required for area-specific search (Region of interest) in Plug-in.
- AI Occupancy Detection: Camera's extension software. V1.60 or later is supported.
- AI-VMD/AI People Counting: Camera's extension software. V2.00 or later is supported.
 - V3.00 or later is required for people or vehicle counting dashboard.
 - V3.20 or later is required for to show the line names set in the camera.
 - V3.70 or later is required for heatmap in dashboard People counting.
- AI Sound Classification: Camera's firmware function.
- AI-VMD/AI People Counting for 360-degree fisheye camera: Camera's extension software. V1.21 or later is supported.
 - V1.50 or later is required for to show the area/line names set in the camera.
- AI Scene Change Detection: Camera's extension software. V1.00 or later is supported.
- AI On-site Learning: Camera's extension software. V1.00 or later is supported.
- AI Processing Relay: Camera's extension software. V1.00 or later is supported.
 - V2.10 or later is required for specify lines/area individually in dashboard.
 - V2.11 or later is required for configure 3rd party camera.

Please see https://i-pro.com/products_and_solutions/en/surveillance/learning-and-support/knowledge-base/product-tips/active-guard-links for more information.

[Partner's application: [Vaxtor Technologies](#)]

- VaxALPR Camera's extension software. V1.3.16 or later is supported.
- VaxOCR GENESIS Camera's extension software. V1.3.7 or later is supported.
- VaxOCR CONTAINER Camera's extension software. V1.0.5 or later is supported.
 - For Multi-Sensor Cameras, only 1ch is supported.
 - VaxALPR does not work just by installing it on the camera.
 - Set "Reports - ONVIF – Destination" to "i-PRO Active Guard" in VaxALPR app settings.



For more information on Vaxtor’s application, please see [application list](#).

Camera’s firmware

Camera with AI engine (hereinafter referred to as “camera”) are supported.

camera model	Version
WV-S1136, WV-S2136, WV-S2136L, WV-S2236L	1.11 or later
WV-S1536L, WV-S1536LN, WV-S1536LTN, WV-S2536L, WV-S2536LN, WV-S2536LTN	1.11 or later
WV-X1571L, WV-X2571L, WV-X2271L, WV-X1551L, WV-X2551L	1.50 or later
WV-S4576L, WV-S4176, WV-S4576LM, WV-S4156, WV-S4556L, WV-S4556LM	1.01 or later
WV-S8543, WV-S8543G, WV-S8543L, WV-S8543LG, WV-S8544, WV-S8544G, WV-S8544L, WV-S8544LG, WV-S8563L, WV-S8563LG, WV-S8564L, WV-S8564LG, WV-S8573L, WV-S8573LG, WV-S8574L, WV-S8574LG	1.01 or later
WV-S15500-V3L, WV-S15500-V3LN, WV-S15500-V3LN1, WV-S15500-V3LK, WV-S15600-V2L, WV-S15600-V2LN, WV-S15700-V2L, WV-S15700-V2LN, WV-S15700-V2LK, WV-S22500-V3L, WV-S22500-V3LG, WV-S22500-V3L1, WV-S22600-V2L, WV-S22600-V2LG, WV-S22700-V2L, WV-S22700-V2LG, WV-S22700-V2L1, WV-S25500-V3L, WV-S25500-V3LN, WV-S25500-V3LG, WV-S25500-V3LN1, WV-S25600-V2L, WV-S25600-V2LN, WV-S25600-V2LG, WV-S25700-V2L, WV-S25700-V2LN, WV-S25700-V2LG, WV-S25700-V2LN1	1.00 or later
WV-S71300-F3	1.10 or later
WV-S61301-Z2, WV-S61302-Z4, WV-S65340-Z2N, WV-S65340-Z2K, WV-S65340-Z4N, WV-S65340-Z4K	1.00 or later
WV-S15500-F3L, WV-S15500-F6L, WV-S22500-F3L, WV-S22500-F6L, WV-S25500-F3L, WV-S25500-F6L	1.01 or later

Please see <https://i-pro.com/global/en/surveillance/training-support/support/technical-information><Control No:C0103> for more information.

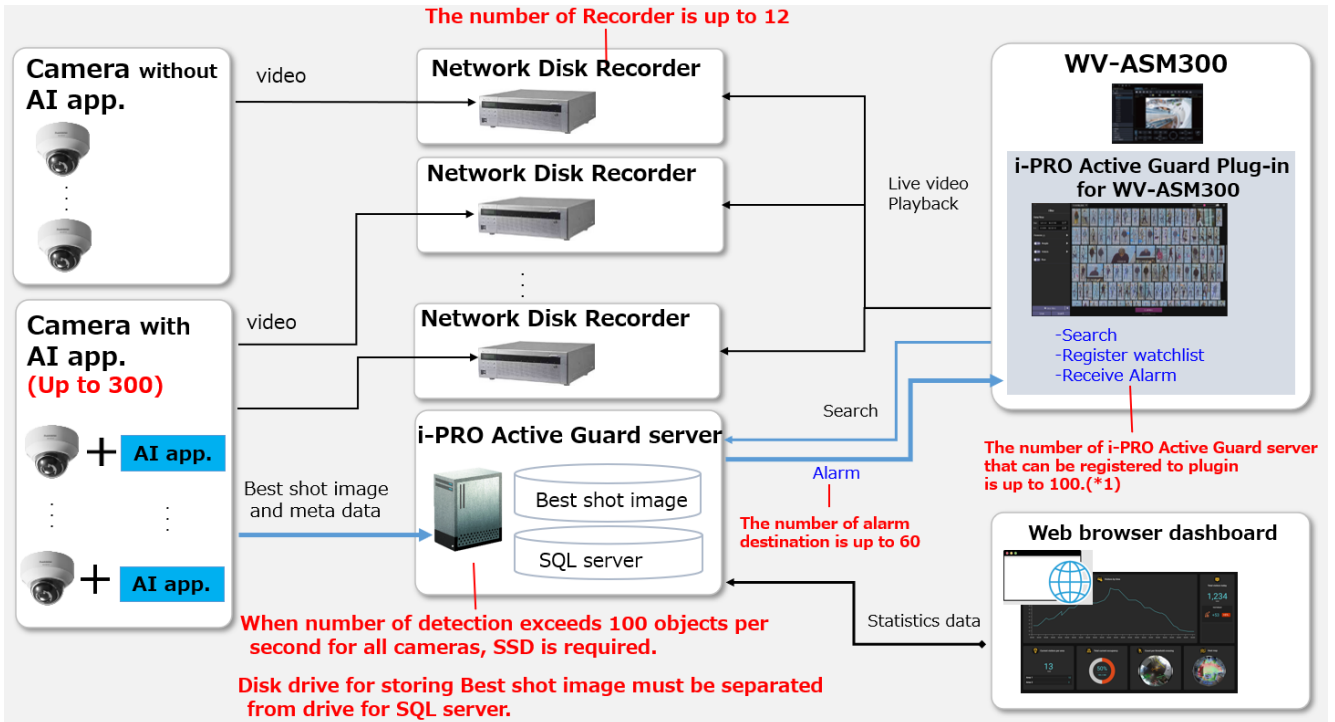
WV-ASM300 / Network disk recorder/Others

Software	Version
WV-ASM300	V4.40 or later
WJ-NX100, WJ-NX200, WJ-NX300, WJ-NX400	V4.10 or later. Also check the compatible version for each camera model.
WJ-NU101, WJ-NU201, WJ-NU300, WJ-NU301	V1.00 or later. Also check the compatible version for each camera model.
WJ-NX310, WJ-NX410, WJ-NX510	V1.00 or later. Also check the compatible version for each camera model.
i-PRO Active Guard server / i-PRO Active Guard Plug-in for WV-ASM300	V1.0.0 or later
Mobile Notification Tool	V1.3.0 or later

3. System design

3.1. System architecture

3.1.A i-PRO Active Guard server installed to dedicated server PC



*1 Plug-in can be connected to multiple i-PRO Active Guard servers. It supports bulk search and watchlist alarm.

Watchlist need to be set for each i-PRO Active Guard server and cannot be shared.

Important:

- Due to i-PRO Active Guard server maintenance, i-PRO Active Guard server and SQL Server must be kept running from 0:00-4:00.

When i-PRO Active Guard server is installed in dedicated server,

- (1) The number of cameras with AI engine is up to 300.
Camera with AI Face Detection is up to 100.
- (2) Up to 12 Network disk recorders can be registered to i-PRO Active Guard server.
- (3) Disk drive for storing Best shot image must be separate from drive for SQL server.

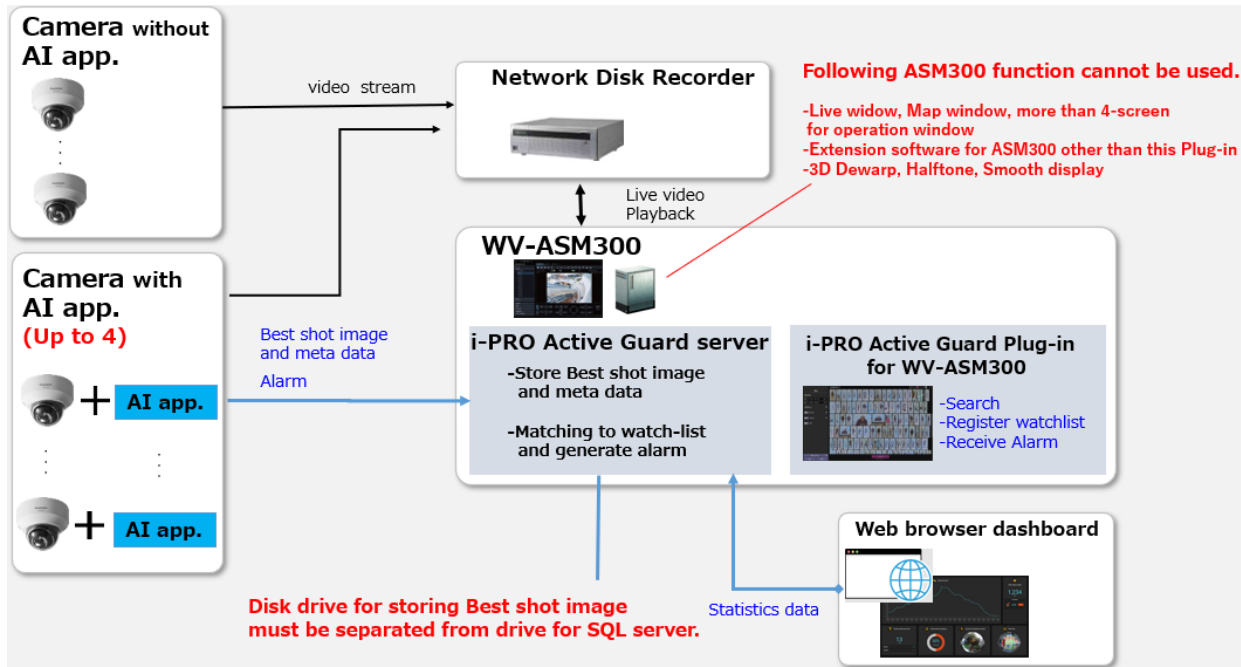
"SQL server" file path is "C:\Program Files\Microsoft SQL Server\".

For the file path to store “Best shot image”, see 4.1.1 or 4.1.5.4.

If you require reliable data management, please consider using RAID5/6.

- (4) The number of alarm destination is up to 60.
- (5) Client PC should be separated from server PC. The number of i-PRO Active Guard server that can be registered to i-PRO Active Guard Plug-in is up to 100.
- (6) For maintenance of i-PRO Active Guard server, it is necessary that the software is running at night.

3.1.B i-PRO Active Guard server installed to PC with WV-ASM300



There are some conditions for installing i-PRO Active Guard server to the PC with WV-ASM300.

Important:

- Due to i-PRO Active Guard server maintenance, i-PRO Active Guard server and SQL Server must be kept running from 0:00-4:00.

i-PRO Active Guard server

- (1) The number of cameras with AI engine is up to 4
- (2) Disk drive for storing Best shot image must be separate from drive for storing video and SQL server.
 "SQL server" file path is "C:\Program Files\Microsoft SQL Server".
 For the file path to store "Best shot image", see 4.1.1 or 4.1.5.4.
 If you require reliable data management, please consider using RAID5/6.
- (3) The maximum number of image data that can be stored is limited to about 1 million.
- (4) For maintenance of i-PRO Active Guard server, it is necessary that the software is running at night and restart the PC regularly.

WV-ASM300

Following ASM300 function cannot be used.

- Live window, Map window, more than 5-screen for operation window
- Extension software for ASM300 other than i-PRO Active Guard Plug-in
- 3D Dewarp, Halftone, Smooth display

If the settings are changed to a state that does not meet the requirements after installation, a warning message will pop up.

Minimum PC requirement is shown on 3.2.

3.2. System requirement

3.2.1 System requirement for i-PRO Active Guard server

Hardware requirement

		Requirement
i-PRO Active Guard server installed in dedicated server	Up to 100 cameras *Camera with AI Face Detection is up to 100.	<ul style="list-style-type: none"> • Intel® Core™ i7-9700 (4.9 GHz, 8 core 8 thread) or better • 32 GB of RAM or more • 64 bit operating system Microsoft® Windows 10 Pro Microsoft® Windows 10 Enterprise Microsoft® Windows 10 Education Microsoft® Windows 10 Pro Education Microsoft® Windows 10 IoT Enterprise * Version 2004 or later Microsoft® Windows 11 Pro Microsoft® Windows 11 Enterprise Microsoft® Windows 11 Education Microsoft® Windows 11 Pro Education Microsoft® Windows 11 IoT Enterprise * Version 23H2 or later Microsoft® Windows Server 2016 Standard Microsoft® Windows Server 2019 Standard Microsoft® Windows Server 2022 Standard Microsoft® Windows Server 2016 Datacenter Microsoft® Windows Server 2019 Datacenter Microsoft® Windows Server 2022 Datacenter • GbE network interface card
	Up to 300 cameras *Camera with AI Face Detection is up to 100.	<ul style="list-style-type: none"> • Intel® Xeon® Silver 4208 (2.1 GHz, 8 core 16 thread) or better • 32 GB of RAM or more • 64 bit operating system Microsoft® Windows Server 2016 Standard Microsoft® Windows Server 2019 Standard Microsoft® Windows Server 2022 Standard Microsoft® Windows Server 2016 Datacenter

		Requirement
		Microsoft® Windows Server 2019 Datacenter Microsoft® Windows Server 2022 Datacenter <ul style="list-style-type: none"> • GbE network interface card
i-PRO Active Guard server installed with ASM300	Up to 4 cameras	<ul style="list-style-type: none"> • Intel® Core™ i7-10700 (4.8 GHz, 8 core 16 thread) or better • 16 GB of RAM or more • 64 bit operating system Microsoft® Windows 10 Pro version 20H2 or later, Microsoft® Windows 11 Pro version 23H2 or later • GbE network interface card • Graphic: NVIDIA Quadro P1000, NVIDIA T1000

Note)

i-PRO Active Guard server can be run on Microsoft® Hyper-V with Windows Server 2022 and VMware® ESXi 7.0 Update 3.

When using virtual platform, CPU, memory, network adapters, and storage may become bottlenecks.

Please consider in advance the allocation of sufficient CPU, memory, and network settings to meet the above hardware requirements.

Common software requirement

Category	Supported software
Database Engines	<ul style="list-style-type: none">• SQL server 2016/2019/2022 <p>The following SQL server 2016 is installed when new installing.</p> <ul style="list-style-type: none">- i-PRO Active Guard server version 1.0.0 to 1.6.2 SQL server 2016 Express Edition.- i-PRO Active Guard server version 1.8.0 or later SQL server 2019 Express Edition. <p>For update i-PRO Active Guard server, SQL Server carries over the existing version.</p> <p>SQL server upgrade to Standard Edition procedure is shown in 5.9.</p>
Web browser for Configuration Tool	<ul style="list-style-type: none">•Microsoft Edge 85 or later•Chrome 83 or later•Firefox 95 or later <p>* In Firefox, if the monitor resolution is higher than Full-HD (1920 x 1080), the display scaling may not work.</p>

Disk drive considerations

When the maximum number of detections exceed 100 objects per second for all cameras, SSD is required for storing data. See 3.3 in detail. If using HDD, data will not be stored, and system become unstable.

Disk drive for storing Best shot image must be separate from drive for SQL server.

"SQL server" file path is "C:\Program Files\Microsoft SQL Server\".

For the file path to store "Best shot image", see 4.1.1 or 4.1.5.4.

If you require reliable data management, please consider using RAID5/6.

Database considerations

The SQL server Express Edition has limitation that the maximum size for database is 10GB, so estimated used disk size for database of face, people, vehicle, etc. should be under 8GB." Check 3.3 to see if the Express edition is sufficient.

3.2.2 System requirement for Plug-in

- Intel® Core™ i7-10700 (4.8 GHz, 8 core 16 thread) or better
- 16 GB of RAM or more
- 64 bit operating system
 - Microsoft® Windows 10 Pro version 20H2 or later
 - Microsoft® Windows 11 Pro version 23H2 or later
- GbE network interface card
- Graphic: NVIDIA Quadro P1000,NVIDIA T1000

3.3. How to determine the system architecture

STEP1: The number of cameras

When the numbers of cameras with AI People detection, AI Vehicle detection, AI Occupancy detection, AI-VMD/AI People Counting, Sound, AI-VMD/AI People Counting for 360-degree fisheye camera or AI Scene Change detection, License plate detection, VaxOCR GENESIS, VaxOCR CONTAINER is no more than 100(AI Face detection is no more than 4), it may be possible that AI server is installed to PC with WV-ASM300. Please continue to check STEP2. When over 100 (or over 4 for AI Face detection), i-PRO Active Guard server should be installed in dedicated server PC.

AI-VMD, Sound function can be used with the network disk recorder and WV-ASM300 without i-PRO Active Guard server and Plug-in. When you use this function on this software, please include the number of cameras.

In case of multi-sensor camera, extension software can be installed for each camera and each camera needs to be registered to i-PRO Active Guard server.

STEP2: The number of extension software

To calculate the bitrate of images, the number of extension software (Face, People, Vehicle, License plate, code, container and AI-VMD/AI People Counting, People Counting for 360-degree fisheye camera) should be considered. Since the amount of counting data by AI Occupancy detection, AI Scene Change detection is small, it is not necessary to consider it. Multiple extension software can be installed to each camera. (Ex, When People and Vehicle are installed to a camera, add 1 for People and Vehicle, respectively.)

		Face	People	Vehicle	License plate	Code	Container	People counting
The number of extension software								
The Number of detections [per camera, per hour]	Max.							
	Avg.							

[Bitrate]

Maximum bitrate of Best shot image [Mbps]	
Maximum bitrate of People counting data [Mbps]	
Total bitrate that server PC receives [Mbps]	

[Disk access]

Estimated data points of detections [per sec]	
---	--

*For people, 1 object is counted as 2 data points. For other objects, 1 object is counted as 1 data point.

When “Maximum number of detections in total“ is less than 100, HDD or SSD is available for disk drive.

When “Maximum number of detections in total“ is over 100, SSD is required.

STEP3: Retention period and storage

	Face	People	Vehicle	License plate	Code	Container	Count/heatmap/Statistics
Retention period(day) (*1)							
Operating time (hours per day)							

*1: Up to 31 days (92 days for Count/heatmap/Statistics) when using SQL Server Express Edition.

Up to 397 days (732 days for Count/heatmap/Statistics) when using SQL Server Standard Edition or higher.

Estimated used disk size for best shot images [GB]	
Estimated used disk size for People counting data [GB]	
Total Estimated used disk size [GB]	

Estimated used disk size for database [GB]	
--	--

When "Estimated used disk size for database" is under 8 GB, SQL Server Express Edition or higher can be used. When more than 8GB, SQL Server Express Edition cannot to be used due to the limitation of Express Edition. Standard Edition or higher is must (Refer to 5.9).

3.4. Ports used in i-PRO Active Guard server

The following table lists the default network ports used by i-PRO Active Guard server.

These ports need to be allowed from firewall configurations.

Port number	Protocol	Port usage
1434	UDP	Connection to SQL Server Browser
1435	TCP	Connection to SQL Server
8090	HTTP	Client Plug-in connection
8091	HTTPS	Client Plug-in connection
8092	HTTPS	Web configuration tool connection
8888	TCP	Internal process communication
55000	TCP	Internal process communication
55002	TCP	Internal process communication

4. Installation and setup

Procedure overview

Install extension software to camera and setup

Camera registration to Network disk recorder.
Recorder registration to WV-ASM300

Please refer the manual for each software.



Install and setup i-PRO Active Guard



Install and setup Plug-in

4.1. Install and setup i-PRO Active Guard server

Download the installer from

https://i-pro.com/products_and_solutions/en/surveillance/learning-and-support/knowledge-base/product-tips/active-guard-links

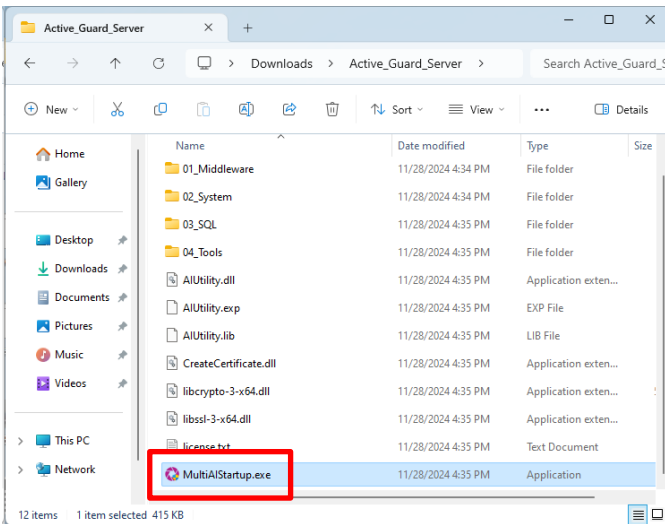
Install the i-PRO Active Guard server software. Configuration after installation can be done from web browser.

4.1.1. Install

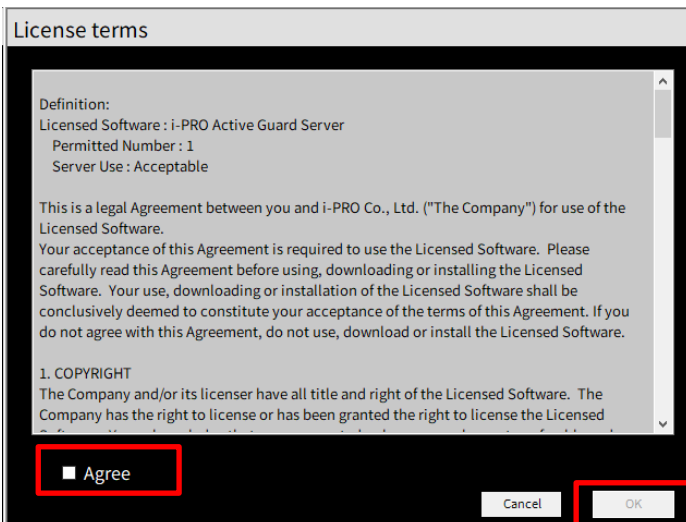
Important:

- Please temporarily turn off antivirus software before installing.

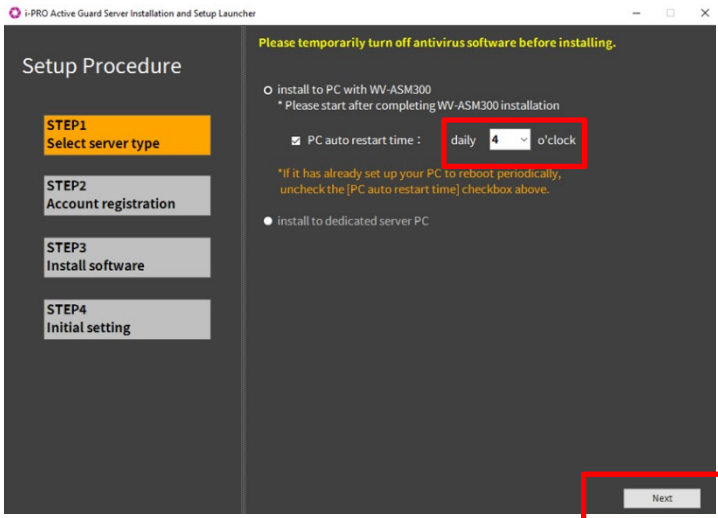
Execute **"MultiAIStartup.exe"** as administrator (file path length must be less than 119).



When .NET Framework 4.8 is not installed on the PC, it will automatically be installed, and the main screen of the setup tool will be displayed after the installation.



Check for [Agree] for License terms and [OK].



Select [install to PC with WV-ASM300] or [install to dedicated server PC].

When [install to PC with WV-ASM300] is selected, select enable or disable the [PC auto restart time] and set the time from 4:00 to 23:00.

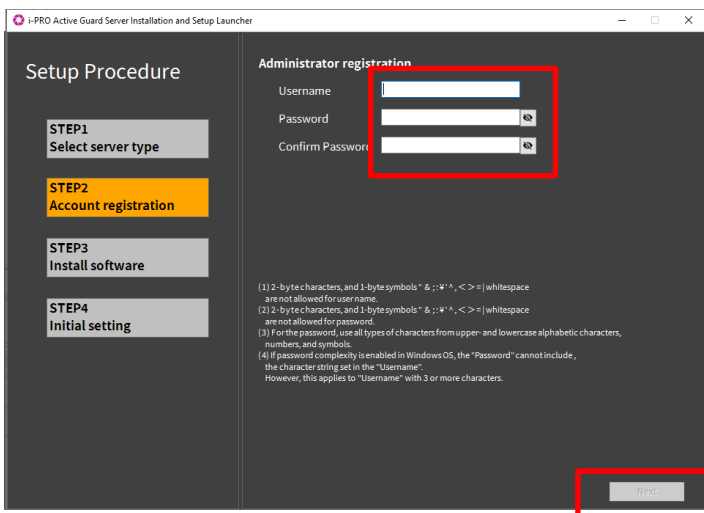
Click [Next].

Note)

[install to PC with WV-ASM300] can be selected when WV-ASM300 is installed in advance.

[install to dedicated server PC] can be selected when WV-ASM300 is not installed.

When you select [install to PC with WV-ASM300] and if you have already set the automatic restart for your PC, uncheck [PC automatic restart time]. Also, make sure to restart from 4:00 to 23:00 so that the restart time will be after the nighttime processing by this software is completed. See 4.1.5.4 for nighttime processing.

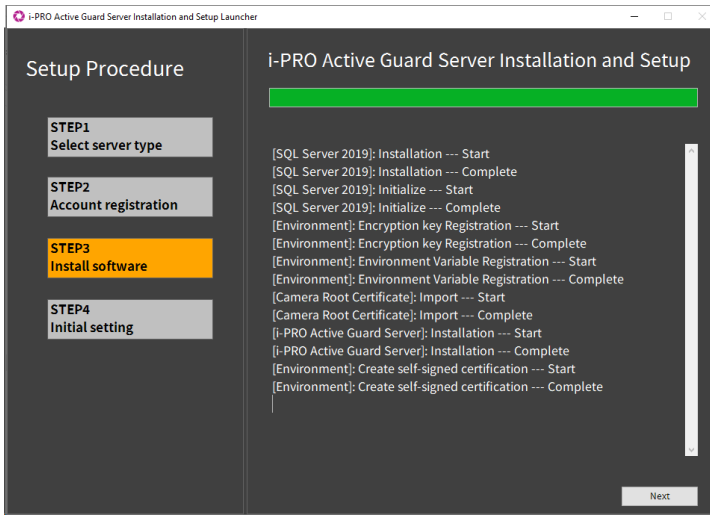


Register credentials and click [Next].

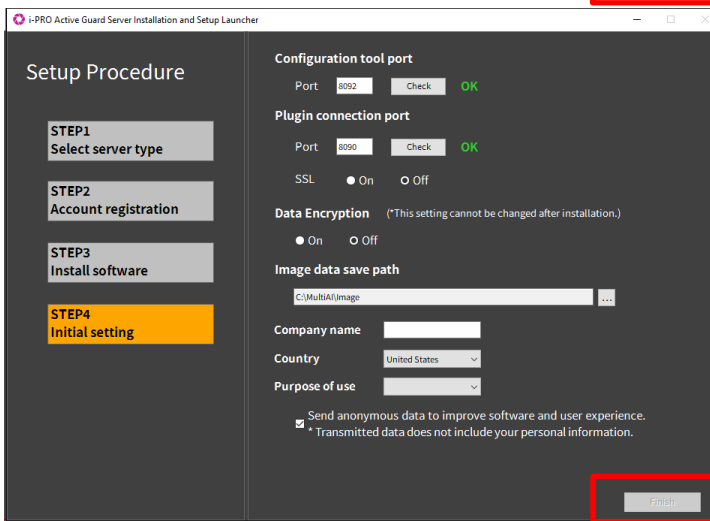
Note)

Make a note of the password you entered and keep it in a safe place.

When you forget the Administrator account, you can reset (Refer to 5.7).



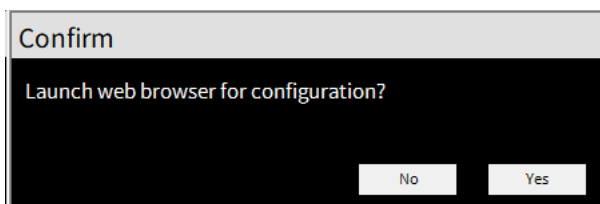
Installation starts and [Next] button will be appeared when finished. Click [Next].



Configure port number, SSL and Data encryption, Image data save path, Company name, Country and Purpose of use and click [Finish].

Note)

When “On” is selected for Data Encryption, Image data will be encrypted. This setting cannot be changed after installation. Re-installation is required when you want to change after completing installation.



A dialog box will appear asking about launch web browser.

Please make your selection as necessary.

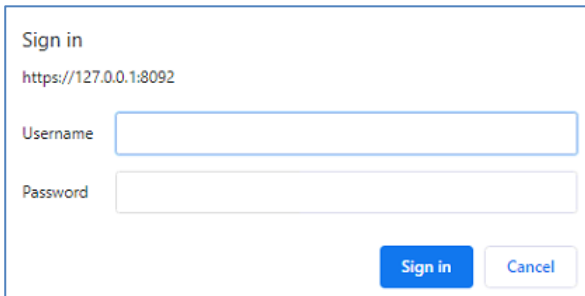
Refer to 4.1.2 for configuration.

4.1.2. Setup i-PRO Active Guard server

4.1.2.1. Login

Access <https://<ip>:8092> using Google chrome, Microsoft Edge or Firefox.

Input credentials.



Note)

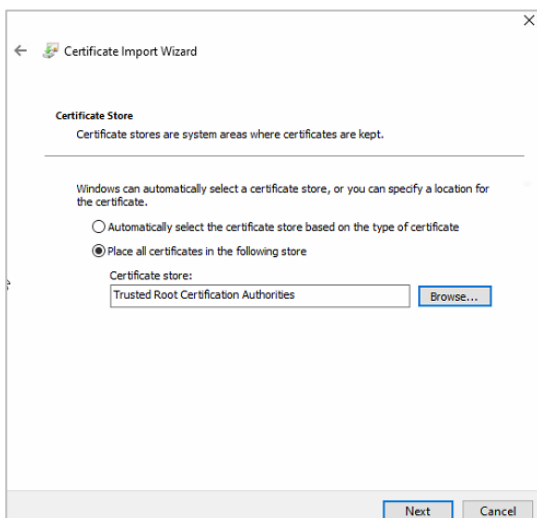
Credentials and port number configured by install tool 4.1.1 are used.

i-PRO Active Guard server uses self-signed certificate for web access.

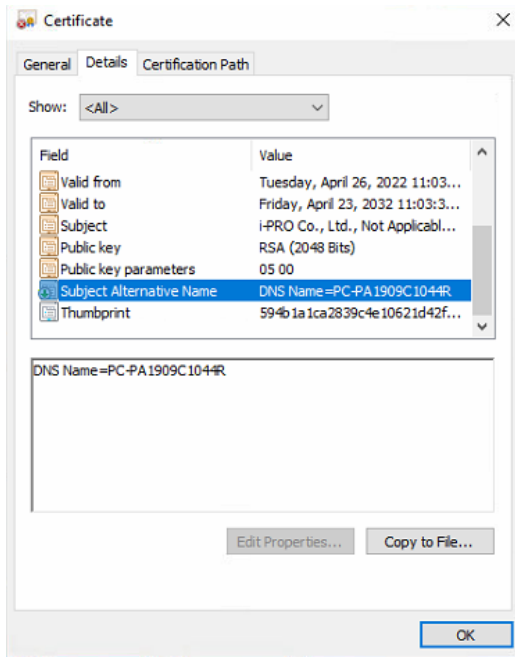
When the security alert window is displayed, click [advanced] and [Proceed to <ip> (unsafe)].

It is possible to prevent the warning display by performing the following procedure for each client PC to be accessed.

- 1) Copy "C:\MultiA\apache24\conf\server.crt" in i-PRO Active Guard server PC to client PC.
- 2) Double click the file and click "Install Certificate".
- 3) Select "Local Machine" for Store Location
- 4) Select "Place all certificates in the following store and "Trusted Root Certification Authorities".



5) Confirm “Subject Alternative Name” from “Details”. DNS Name=xxxx is shown.




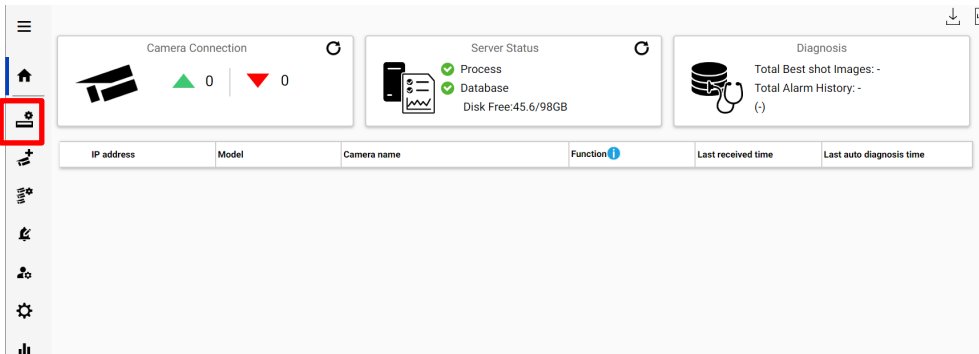
6) Open “C:\Windows\System32\drivers\etc\hosts” and add IP address of i-PRO Active Guard server and xxxx (DNS Name).

ex. 192.168.0.125 PC-PA1909C1044R

7) Access <https://xxxx:8092> using web browser.

4.1.2.2. Register Recorders

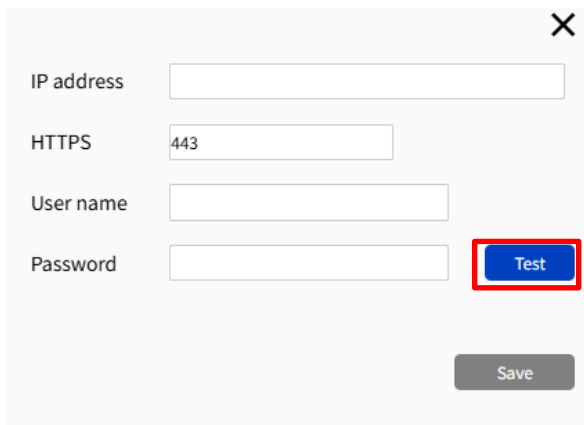
Click  (Register Recorders)



Click [Add]



Input Recorder's information and click [Test]



The form contains the following fields and buttons:

- IP address:
- HTTPS:
- User name:
- Password:
- Test: (highlighted in red)
- Save:

When [Succeeded] is shown, click [Save].

Confirm the recorder is registered.

Restart process is required to finish configuration. Restart

Register Recorders Add Delete

		IP address	Recorder
1	<input type="checkbox"/>	192.168.0.201	WJ-NX200

Note) Restart button will be appeared on the top of screen, but you do not need click now.

You need to click Restart after completing all other configuration.

Up to 12 Network disk recorders can be registered.

4.1.2.3. Register Cameras

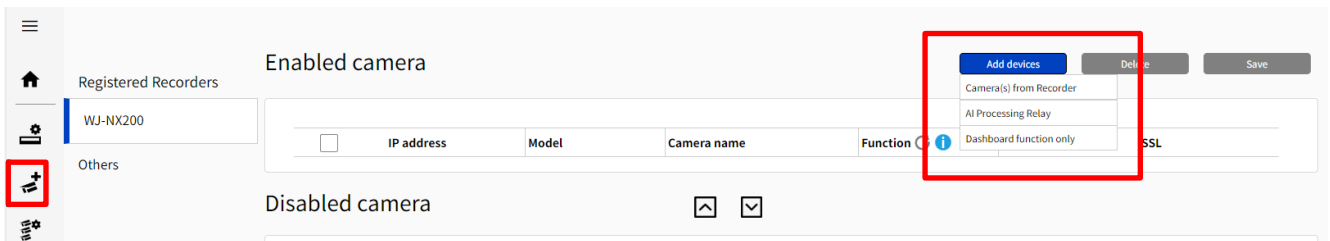
STEP1

Click  (Register Cameras)

STEP2

Click [Add devices] and select camera registration method.

- Camera(s) from Recorder Please refer to [4.1.2.3.1].
- AI Processing Relay Please refer to [4.1.2.3.2].
- Dashboard function only Please refer to [4.1.2.3.3].

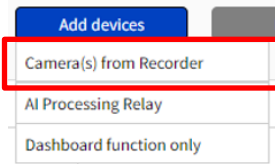


4.1.2.3.1. Camera(s) from Recorder

Register the camera registered on the recorder to i-PRO Active Guard.

STEP1

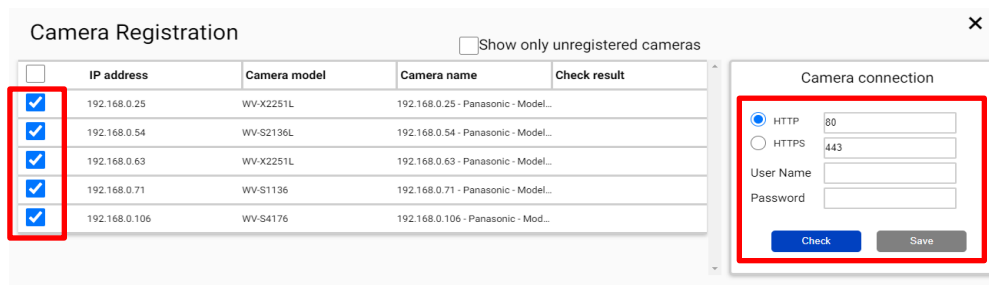
Click [Add devices] - [Camera(s) from Recorder]



STEP2

All i-PRO cameras (including not supported cameras) are shown.

Select cameras you want to register to i-PRO Active Guard, input camera's credentials and click [Check].



Note)

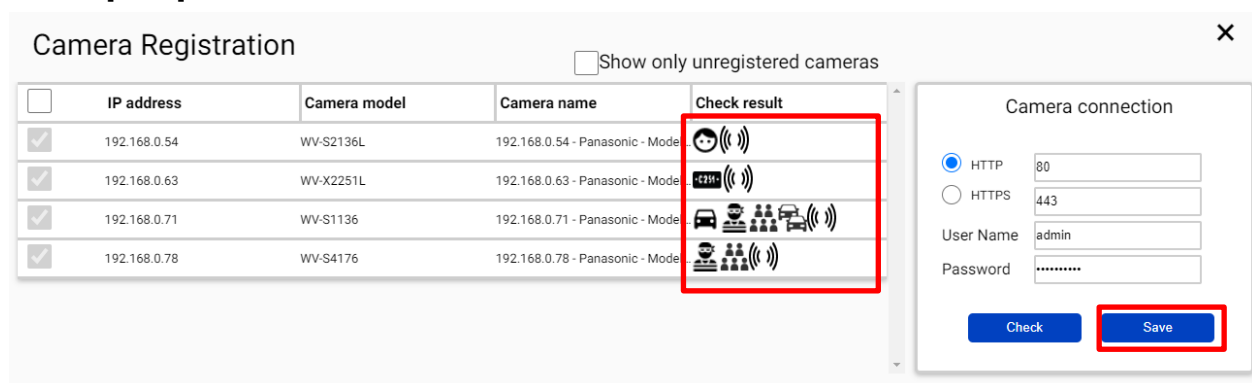
Camera can be sorted by [IP address], [Camera model] or [Camera Name].

Unregistered cameras can be filtered by checking [Show only unregistered cameras].

STEP3

Icon related to AI function is shown for supported AI cameras.

Click [Save].



Note)

For information about icons, please refer to [4.1.2.3.4].

STEP4

Confirm cameras are registered.

Restart process is required to finish configuration. [Restart](#)

Registered Recorders **Enabled camera** [Add devices](#) [Delete](#) [Save](#)

Registered Recorders

- WJ-NX200
- Others

<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
1 <input type="checkbox"/>	192.168.0.25	WV-X2251	Cam2		80	Off
2 <input type="checkbox"/>	192.168.0.50	WV-S2136	CAM6		80	Off
3 <input type="checkbox"/>	192.168.0.71	WV-S1136	CAM11		80	Off
4 <input type="checkbox"/>	192.168.0.104	WV-S7130	Cam3		80	Off

Disabled camera

<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
--------------------------	------------	-------	-------------	----------	--------------	-----

Note)

If multiple recorders are registered, it is necessary to register cameras by selecting each recorder from [Registered Recorders] and [Add devices] - [Camera(s) from Recorder].

Registered Recorders **Enabled camera** [Add devices](#) [Delete](#) [Save](#)

Registered Recorders

- WJ-NX200
- WJ-NX410
- Others

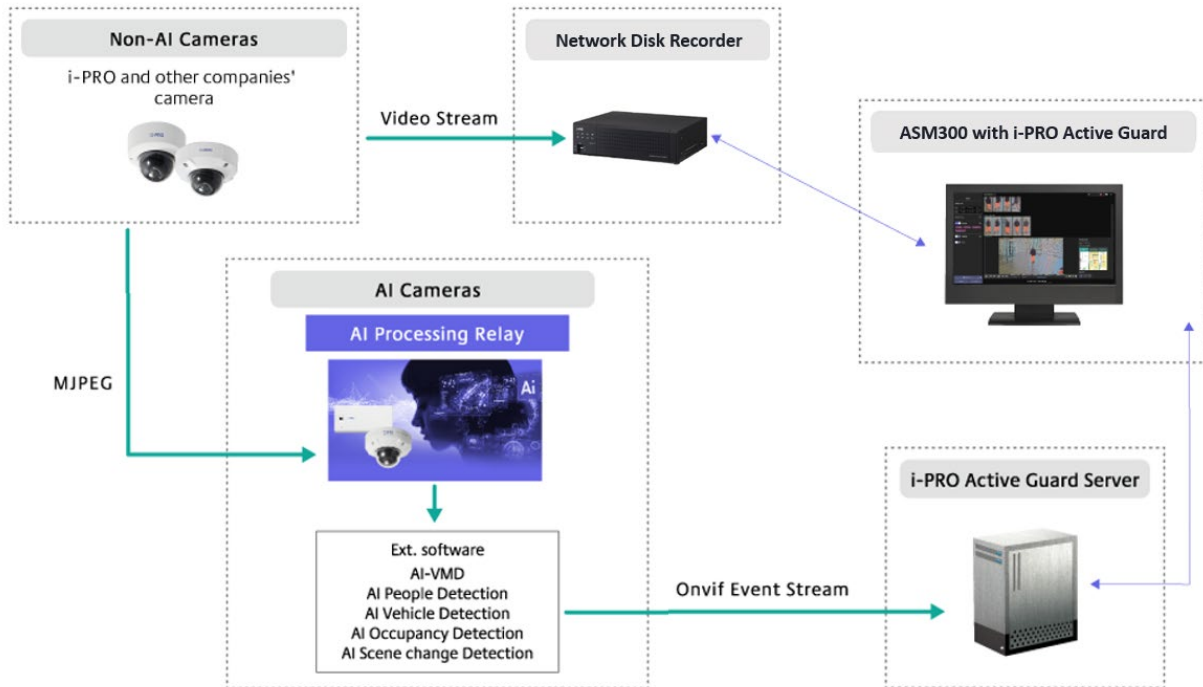
<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
--------------------------	------------	-------	-------------	----------	--------------	-----

Disabled camera

4.1.2.3.2. AI Processing Relay

Register camera with AI Processing Relay application to i-PRO Active Guard.

[Overview of AI Processing Relay]



To use AI Processing Relay, you need to configure the AI camera, AI Processing Relay application, Recorder, ASM300, and i-PRO Active Guard. For detailed , please refer to each manual.

i-PRO Configuration Tool (iCT) version V4.20 or later is required for configuration.

Download iCT from the following link

https://i-pro.com/products_and_solutions/en/surveillance/learning-and-support/knowledge-base/product-tips/active-guard-links

STEP1

(Setting target: AI camera and AI Processing relay application)

*For detailed , please refer to manual.

https://i-pro.com/products_and_solutions/en/surveillance/learning-and-support/knowledge-base/product-tips/active-guard-links

- (1) Confirm the operating conditions of the AI Processing Relay application.
- (2) Install AI Processing Relay application and extension software.
- (3) Configure settings for non-AI cameras.
- (4) Configure AI Processing Relay application.
- (5) Configure extension software that works with AI Processing Relay application

STEP2

(Setting target: Recorder)

Register the non-AI camera set in step1-(3) to the recorder.

STEP3

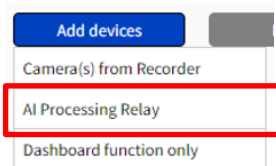
(Setting target: ASM300)

Register or update recorder in step2 to ASM300.

STEP4

(Setting target: i-PRO Active Guard)

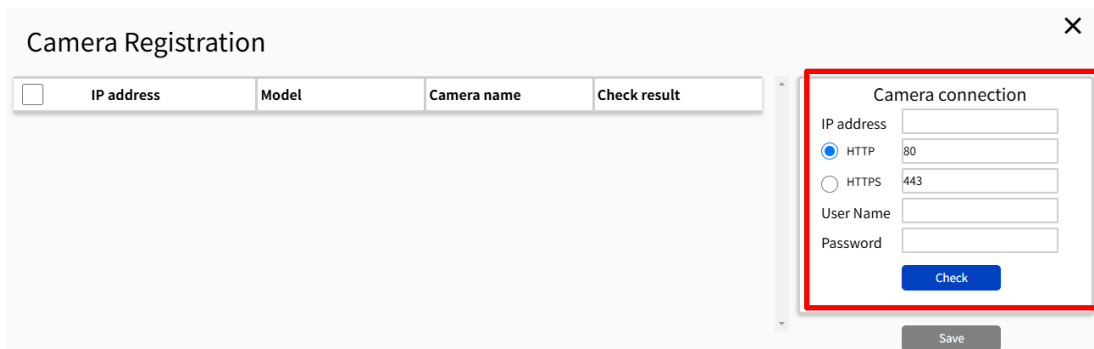
Click [Add devices] - [AI Processing Relay App].



STEP5

(Setting target: i-PRO Active Guard)

Input the IP address and credentials of the AI camera to which have added AI Processing Relay App, click [Check].



STEP6

(Setting target: i-PRO Active Guard)

Icon related to AI function is shown for supported AI cameras.

Click [Save].

<input type="checkbox"/>	IP address	Model	Camera Name	Check result
<input checked="" type="checkbox"/>	192.168.0.70	WV-S25500-F3L(WV-X25700-V2L)	192.168.0.34 - Model: Panasonic	
<input checked="" type="checkbox"/>	192.168.0.70	WV-S2136L(WV-X25700-V2L)	192.168.0.14 - Panasonic - Model	
<input checked="" type="checkbox"/>	192.168.0.70	Unicast RTP(WV-X25700-V2L)	192.168.0.20 - Panasonic - Model	

Camera connection

IP address: 192.168.0.70

HTTP: 80

HTTPS: 443

User Name: admin

Password:

Check

Save

Note)

- For information about icons, please refer to [4.1.2.3.4].
- Model in the camera list will be displayed as below.

“Non-AI camera model (AI camera model)”

ex) WV-S25500-F3L(WV-X25700-V2L)

↑ ↑
Non-AI camera AI camera with AI Processing Relay application

Important:

- If AI Processing Relay registration fails, please try the following steps.
 - (1) Verify that the MAC address of the non-AI camera is displayed in the AI Processing Relay application settings using iCT.
Non-AI camera whose MAC address is not displayed cannot be used in this system..
 - (2) If MAC address is displayed, use iCT to reconfigure the AI processing relay application.

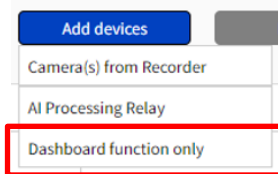
4.1.2.3.3. Dashboard function only

Register the camera to i-PRO Active Guard without registering camera to the recorder.

Cameras registered with this setting can only be used with the Dashboard function ; they cannot be used with the i-PRO Active Guard plug-in.

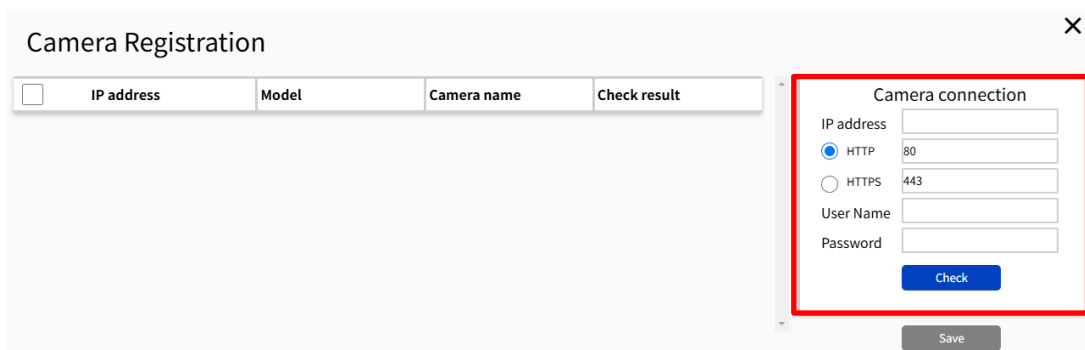
STEP1

Click [Add devices] - [Dashboard function only]



STEP2

Enter IP address of the camera, credentials, click [Check].



STEP3

Icon related to AI function is shown for supported AI cameras.
Click [Save].

The screenshot shows a 'Camera Registration' dialog box. On the left, there is a table with the following data:

<input type="checkbox"/>	IP address	Model	Camera name	Check result
<input checked="" type="checkbox"/>	192.168.0.70	WV-X25700-V2L	WV-X25700-V2L	
<input checked="" type="checkbox"/>	192.168.0.70	WV-X25700-V2L	WV-X25700-V2L	
<input checked="" type="checkbox"/>	192.168.0.70	WV-X25700-V2L	WV-X25700-V2L	

On the right, the 'Camera connection' panel contains the following fields:

- IP address: 192.168.0.70
- Protocol: HTTP, HTTPS
- Port: 80
- User Name: admin
- Password:

Buttons: Check, Save (highlighted with a red box).

Note)

- For information about icons, please refer to [4.1.2.3.4].
- If you registered the camera from [Dashboard function only], select [Others] in [Registered Recorders] and check the registration status.

The screenshot shows the 'Registered Recorders' interface. On the left, there is a sidebar with the following options:













- Registered Recorders
- WJ-NX200
- WJ-NX410
- Others** (highlighted with a red box)

The main area is titled 'Enabled camera' and contains a table with the following columns:

<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
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Below the table, there is a 'Disabled camera' section with two checkboxes.

4.1.2.3.4. AI function icon

-  AI Face detection
-  AI People detection
-  AI Vehicle detection
-  AI Video motion detection
-  AI Sound detection
-  AI Scene Change detection
-  People Counting/Occupancy (*)
-  Vehicle Counting
-  On-site Learning Object Counting
-  License plate detection
-  Code Detection
-  Container Detection

* The available functions differ depending on the installed application.

	Line Count	Area count	Heat map	Occupancy detection
WV-XAE200W	yes	-	yes	-
WV-XAE207W	-	yes	-	yes
WV-XAE300W	yes	yes	yes	yes

4.1.3. Restart process to apply changes

*To apply any configuration changes, restart process is required.

When you finish all configurations, click “Restart” from display bar above or “Server Status” in “Home” screen. (4.1.8.2)

Restart process is required to finish configuration.

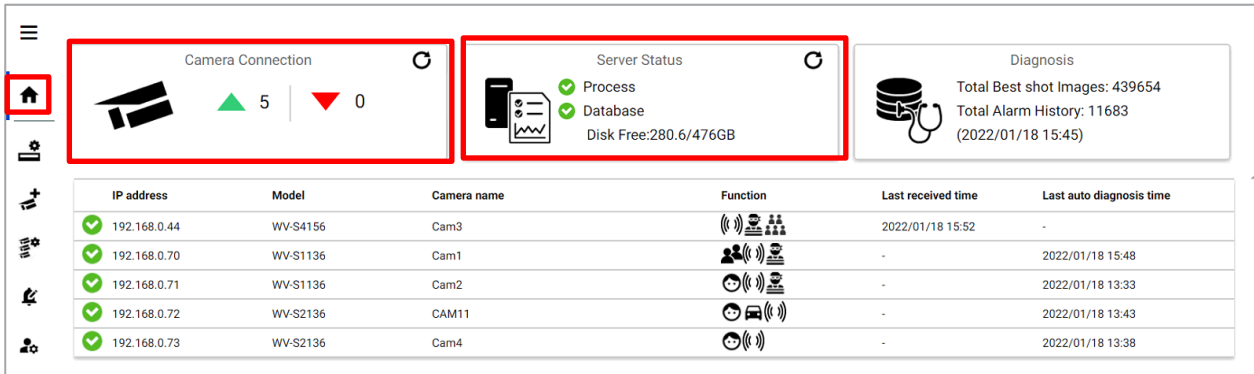
Restart

4.1.4. Check

Click  (Home)


- Check camera connection


Check all registered cameras are connected.



The screenshot shows the i-PRO Active Guard server interface. On the left is a navigation menu with a home icon highlighted. The main content area has three summary cards: 'Camera Connection' (5 connected, 0 disconnected), 'Server Status' (Process and Database green, Disk Free: 280.6/476GB), and 'Diagnosis' (Total Best shot Images: 439654, Total Alarm History: 11683). Below these is a table of camera connections.

IP address	Model	Camera name	Function	Last received time	Last auto diagnosis time
192.168.0.44	WV-S4156	Cam3		2022/01/18 15:52	-
192.168.0.70	WV-S1136	Cam1		-	2022/01/18 15:48
192.168.0.71	WV-S1136	Cam2		-	2022/01/18 13:33
192.168.0.72	WV-S2136	CAM11		-	2022/01/18 13:43
192.168.0.73	WV-S2136	Cam4		-	2022/01/18 13:38


 means the number of cameras connected. (Meta data session between camera and i-PRO Active Guard server).

 means the number of cameras disconnected. When disconnection detected, confirm network connection to camera.

- Check Server status

Check Process and Database shows status green. 

4.1.5. System configuration (optional)

Click  (Configure system) and change settings if needed.

4.1.5.1. General

Select [Auto], [English] or [Japanese] for [Language]. (Default: Auto).

Check or uncheck for [Send anonymous data to improve software and user experience].

Note)

When the language configuration for web browser is other than English or Japanese, English is shown.

4.1.5.2. Client Plug-in connection

Select [HTTP] or [HTTPS] and port number (Default: Set by install tool at 4.1.1)

Client plugin connection

<input checked="" type="radio"/> HTTP	<input type="text" value="8090"/>	(1-65535)
<input type="radio"/> HTTPS	<input type="text" value="8091"/>	(1-65535)

Note)

For secure communication, HTTPS is recommended.

4.1.5.3. Configuration page access

Set port number for configuration tool (Default: Set by install tool at 4.1.1)

Configuration tool access port

HTTPS	<input type="text" value="8092"/>	(1-65535)
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Note)

When you change and restart software at 4.1.3, you need to access `https://<ip>:<port>` using new port number. Make a note not to forget.

4.1.5.4. Database

Configuration item	Comment
Storing images in database	<p>All data(default): Store all data including images.</p> <p>Only alarm and statistics data: Store only alarm and statistics data</p> <p>Only statistics data: Store only statistics data</p>
License plate number	<p>Enable/Disable can be configured. (Default: Enable)</p> <p>Sets whether to store the license plate number in SQL Server.</p>
Retention period	<p>[For face image, people image, vehicle image, license plate image, code images, container images and alarm history]</p> <p>Using SQL Server Express Edition :1 – 31 days (Default: 31).</p> <p>Using SQL Server Standard Edition or higher:1 – 397 days (Default: 397).</p> <p>[For Count/heat map/statistics]</p> <p>Using SQL Server Express Edition :1 – 92 days (Default: 92).</p> <p>Using SQL Server Standard Edition or higher:1 – 732 days (Default: 732).</p> <p>Note)</p> <p>Data after retention period will be deleted at night (0:00am ~ 3:30 am). If the server is shut down, data cannot be deleted, so new data may not be stored due to lack of storage space.</p>
CSV backup	<p>Enable/Disable can be configured. (Default: Disable)</p> <p>When enable and the retention period for counting data expires, the data will be deleted from SQL server but automatically backed up as CSV file.</p> <p>Note)</p> <p>When Enable, [Max usage of image storage drive] will be also enabled automatically.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Important:</p> <ul style="list-style-type: none"> • Statistics data in CSV backup files cannot be used on dashboard by itself. This data can be used only in comparison view and 1 day duration. * When [Comparison] is checked, and the [Display Duration] is selected for 1 day in Search Mode. </div>

Configuration item	Comment
Max usage of image storage drive (*)	<p>Enable/Disable and data size 10- 2000 (GB) can be configured. (Default: Disable)</p> <p>Note) When enabled, the used disk space of drive for storing Best shot images exceed the setting value, old image will be deleted automatically. This works every hour. You can manage data size using this configuration that i-PRO Active Guard server stores. Used disk space equals total volume minus free space.</p>
Image data save path	<p>Save path for images (Default: C:\MultiAllImage)</p> <p>Note) When you change save path, all existing image data cannot be used from i-PRO Active Guard Plug-in and Dashboard.</p>
SQL Server data save path	SQL Server data save path is shown. You cannot change this.
Estimated data points of detections [per sec]	<p>50 -300 (Default: 100)</p> <p>*For people, 1 object is counted as 2 data points. For other objects, 1 object is counted as 1 data point.</p> <p>Note) If the number of object data from all cameras exceeds the value, those object data will be discarded to reduce disk access so that system is stable. SSD is required in case of 100 or more. When you set over 100 using HDD, system will be unstable.</p>
Data encryption	On/Off is shown set by install tool at 4.1.1. You cannot change this after installation.

* Simple calculator can be used by clicking 

Input parameters of your system and click Calc. Estimate used disk space is shown.

X

Number of cameras

Face People Vehicle People counting

Average number of object per camera, per hour

Face People Vehicle

Retention period(day)

Face People Vehicle People counting

System operating time(hours per day)

Face People Vehicle People counting

Calc

Estimated used disk space

image:41.15GB

database:2.48GB

*If you need calculations that include extension software other than the above, please access the following URL and confirm.
https://i-pro.com/products_and_solutions/en/surveillance/learning-and-support/knowledge-base/product-tips/active-guard-links

Note)

Estimated used disk space is just a reference. Actual data size highly depends on actual environment.

4.1.5.5. Initialization

Image: delete all best shot images.

Alarm history: delete all alarm history.

Statistics data: delete statistics data.

Watchlist: delete all Faces watchlist, People watchlist, Vehicles watchlist, LPR watchlist (also registered license plate and group), OCR watchlist (also registered OCR Code and group) and Container watchlist (also registered container code and group). See operation manual about watchlist.

Configuration: delete all registration data (Recorder, Camera and logs) except for port and user account.

Note)

It may take time to delete image depending on the number of images. When deleting, button will be as follows. Please update page to confirm the latest status.

Image Alarm history Statistics data


Watchlist Configuration
(Except for port and user account)

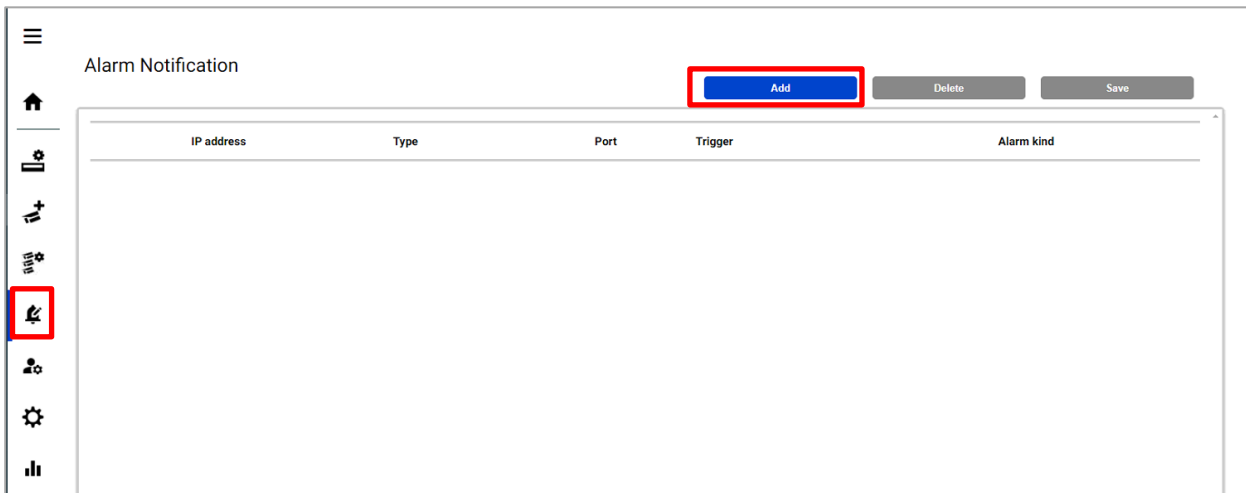
Now deleting

4.1.6. Alarm Notification configuration (optional)

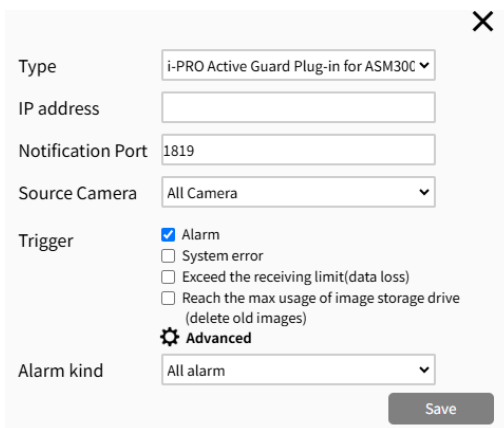
Alarm notification configuration can be configured for various alarm.

When setup for i-PRO Active Guard Plug-in (4.2.3), this configuration will be done automatically. To change the notification conditions, set manually from this screen.

Click  (Alarm notification) and [Add]



- When [i-PRO Active Guard Plug-in for ASM300], [Camera] or [Mobile notification tool] is selected for [Type], set the input items displayed and click [Save].



Type: i-PRO Active Guard Plug-in for ASM300

IP address:

Notification Port: 1819

Source Camera: All Camera

Trigger: Alarm
 System error
 Exceed the receiving limit(data loss)
 Reach the max usage of image storage drive (delete old images)

Alarm kind: All alarm

Save

- When [IO Unit (ADAM-6256)] is selected for [Type], set the input items displayed and click [Save].

The screenshot shows a configuration dialog box for the IO Unit (ADAM-6256). The 'Type' dropdown is set to 'IO Unit(ADAM-6256)'. Other fields include 'IP address', 'Notification Port' (80), 'Source Camera' (All Camera), 'User Name', 'Password', and 'Command' (DO0=1). A note below the command field reads '*DOn = y n : Channel number(0-15), y : value (0 or 1)'. There are checkboxes for 'Dwell time' (5 sec) and 'Command after dwell time'. The 'Trigger' section has 'Alarm' checked, with other options like 'System error', 'Exceed the receiving limit(data loss)', and 'Reach the max usage of image storage drive (delete old images)' unchecked. An 'Advanced' gear icon is visible. The 'Alarm kind' dropdown is set to 'All alarm'. A 'Save' button is at the bottom right.

- When [Custom HTTP alarm] is selected for [Type], set the input items displayed and click [Save].

The screenshot shows a configuration dialog box for the Custom HTTP alarm. The 'Type' dropdown is set to 'Custom HTTP alarm'. Other fields include 'IP address', 'Notification Port' (80), 'Source Camera' (All Camera), 'Command', 'Dwell time' (5 sec), and 'Command after dwell time'. The 'Trigger' section has 'Alarm' checked, with other options like 'System error', 'Exceed the receiving limit(data loss)', and 'Reach the max usage of image storage drive (delete old images)' unchecked. An 'Advanced' gear icon is visible. The 'Alarm kind' dropdown is set to 'All alarm'. A 'Save' button is at the bottom right.

[Type]

Select software of alarm destination from [i-PRO Active Guard Plug-in for ASM300], [Camera], [Mobile notification tool], [IO Unit (ADAM-6256)] or [Custom HTTP alarm].

[Camera] can be used to send an alarm to a specific camera when this software detects a registered face detection or registered people detection. When selecting a camera, it is necessary to turn on the command alarm from camera configuration. If there is no target [Alarm kind], [Camera] is hidden.

[IO Unit (ADAM-6256)] can be used to send an alarm to IO Unit ADAM-6256 manufactured by Advantech Co., Ltd.

[Custom HTTP alarm] can be used to send an alarm to a specific device by HTTP.

[IP address] [Notification port]

Input alarm destination information. When selecting [i-PRO Active Guard Plug-in for ASM300], the same value should be set from Preference setting of Plug-in (refer to Operation manual). When selecting [Camera], the port number should be the same with command alarm port on camera side.

[Source Camera]

Specify the camera that receives the alarm notification from the registered camera.

[Command]

Specify the command to be sent to the device when an alarm occurs.

When [IO unit (ADAM-6256)] is selected as the type

Enter the channel number and value you want to control.

Example 1: If you want to set DO0 to 1, enter [DO0=1].

Example 2: If you want to set DO0 and DO1 to 1, enter [DO0=1&DO1=1].

*All channels not specified will be 0. For details, refer to the ADAM-6256 manual.

When [Custom HTTP alarm] is selected as the type

Enter according to the specifications of the device to be connected.

Example: When sending http://<ip>:<port>/test, set [/test].

[Dwell time]

Specify the time from sending the command set in [Command] to the command sent in [Command after dwell time].

[Command after dwell time]

Specify the command to be sent after sending the command set in [Command]. This item can be set when [Dwell time] is checked.

[Trigger]Alarm

Of the Registered face detection, Registered people detection, Registered vehicle detection, Registered/Unregistered LPR detection, Registered/Unregistered Code detection, Registered/Unregistered Container detection, AI-VMD, Sound detection, AI Occupancy detection and AI Scene Change detection, the alarm specified in [Alarm kind] is notified.

System error

Error that i-PRO Active Guard server detects. (ex. camera connection error between camera and i-PRO Active Guard server.)

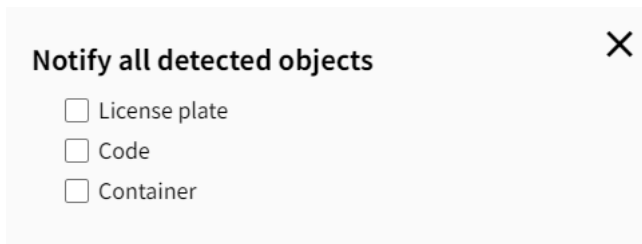
Exceed the receiving data limit (data loss)

When the data exceeds the setting value for “Max frequency of receiving object data (per sec)” configured at 4.1.5.4.

Reach the max usage of image storage drive (delete old images)

When the usage of image storage drive exceeds the setting value for “Max usage of image storage drive (GB)” configured at 4.1.5.4.

Advanced



Notify all detected objects

License plates

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

Code

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

Container

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

[Alarm kind]

When [i-PRO Active Guard Plug-in for ASM300], [Mobile notification tool], [IO Unit (ADAM-6256)] or [Custom HTTP alarm] is selected for [Type]

Select from [All alarm], [Registered face detection], [Registered people detection], [Registered vehicle detection], [Registered/Unregistered LPR detection], [Registered/Unregistered Code detection], [Registered/Unregistered Container detection], [AI-VMD], [Sound detection], [AI Occupancy detection] and [AI Scene Change detection]. When category is set for face watchlist, the name of category is shown, and notification destinations can be set according to each category.

When [Camera] is selected for [Type]

Select from [Registered face detection], [Registered people detection] or [Registered vehicle detection], [Registered/Unregistered LPR detection], [Registered/Unregistered Code detection], [Registered/Unregistered Container detection].

Note)

Up to 60 can be set for alarm notification.

The contents displayed in [Alarm type] differ depending on the type of registered camera or extension software.

When setup for i-PRO Active Guard Plug-in (4.2.3), this configuration will be done automatically. In this case, [Alarm] is set to [Type] and [All alarms] is set to [Alarm kind].

Confirm the configuration is done.

Restart process is required to finish configuration. [Restart](#)

Alarm Notification [Add](#) [Delete](#) [Save](#)

	Destination IP address	Type	Port	Source Camera	Trigger	Alarm kind
1	192.168.0.227	i-PRO Active Guard Plug-in for ASM300	1819	All Camera	<input checked="" type="checkbox"/> Alarm <input type="checkbox"/> System error <input type="checkbox"/> Exceed the receiving limit(data loss) <input type="checkbox"/> Reach the max usage of image storage drive(delete old images) ⚙️ Advanced	All alarm

To change [Trigger] and [Alarm kind], change from this screen and click [Save].

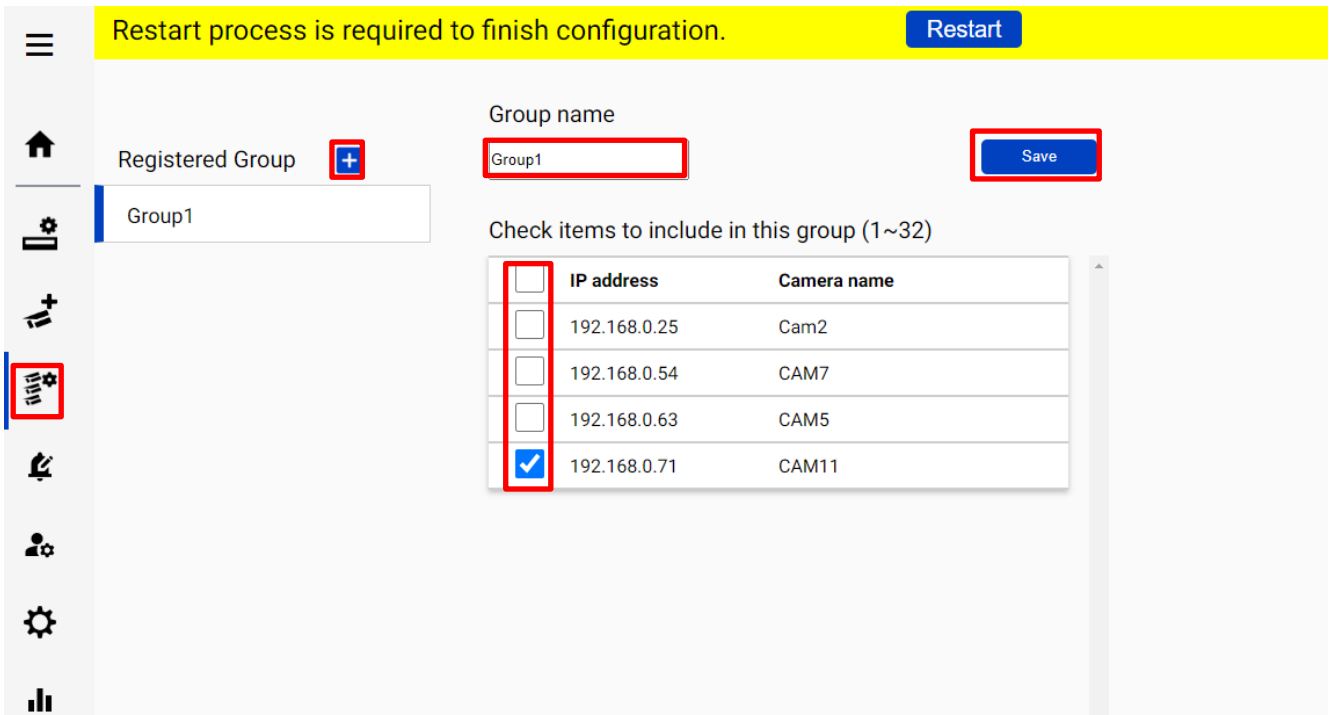
If you want to delete it, select the row and click [Delete].

4.1.7. Dashboard configuration (optional)

4.1.7.1. Camera group configuration

When displaying the chart on the dashboard, it is possible to display it as statistical information for each group consisting of multiple cameras instead of statistical information for each camera.

Click  (Camera Group).



Restart process is required to finish configuration. [Restart](#)

Registered Group [+](#)

Group1 [Save](#)

Group name: Group1

Check items to include in this group (1~32)

<input type="checkbox"/>	IP address	Camera name
<input type="checkbox"/>	192.168.0.25	Cam2
<input type="checkbox"/>	192.168.0.54	CAM7
<input type="checkbox"/>	192.168.0.63	CAM5
<input checked="" type="checkbox"/>	192.168.0.71	CAM11

Click [+] button, input Group name, check for camera and [Save].


Note)

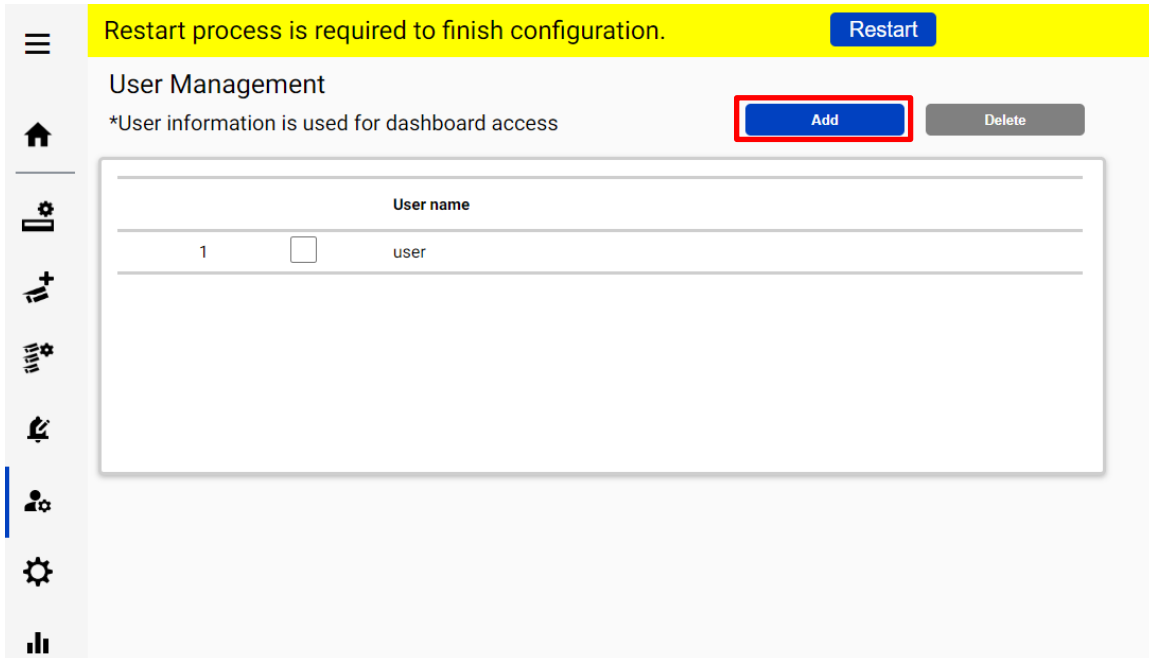
Up to 16 groups can be configured.

To delete camera group, right click the group and select [Delete Camera Group].

4.1.7.2. User Management

By registering multiple users, it is possible to customize the dashboard display for each user.

Click  (User Management) and [Add].



Restart process is required to finish configuration. [Restart](#)

User Management

*User information is used for dashboard access [Add](#) [Delete](#)

User name		
1	<input type="checkbox"/>	user

On the screen that appears, enter [User name], [Password] and [Retype password] and then [Save].

4.1.8. More information about status (optional)

4.1.8.1. Camera Connection

IP address	Model	Camera name	Function	Last received time	Last auto diagnosis time
192.168.0.54	WV-S2136L	Cam2		2021/06/16 19:54	2021/06/16 19:42
192.168.0.63	WV-X2251L	CAM7		2021/06/16 19:54	2021/06/16 19:47
192.168.0.71	WV-S1136	CAM5		2021/06/16 19:54	2021/06/16 19:52
192.168.0.78	WV-S4176	CAM11		2021/06/16 19:33	2021/06/16 19:37

: Camera is connected.

: Camera is not connected.

: Camera is connected, but last auto diagnosis result error.

Metadata session is connected, but AI application on camera side may not work well. Check AI application on camera side is installed, schedule setting is on and also check whether “Last received time”.

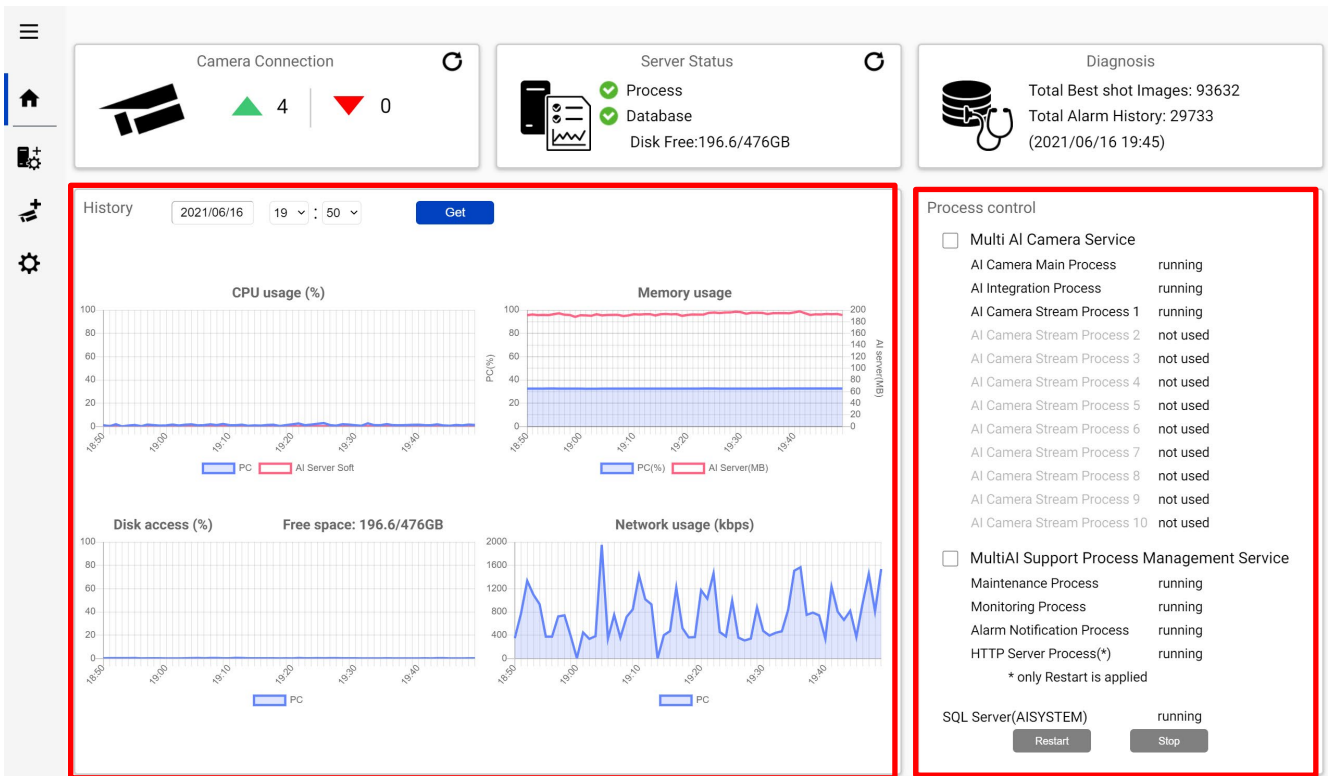
“**Last received time**” shows the last detection time that the camera detected face, people, vehicle, license plate, code, container or alarm. If this time is older than when camera captured actually objects, AI application on camera side may not work well.

“**Last auto diagnosis time**” is the latest time when i-PRO Active Guard server tested connection to camera and database. The test executes every 5 minutes for a camera in order. When error occurs, the time is shown in red color. In that case, check Log and confirm the status of camera or database.

Note)

When schedule setting for the AI application is off, last auto diagnosis will be failed. If it is intended, please ignore this indicator.

4.1.8.2. Server Status



History

History shows CPU usage, Memory usage, Disk access and Network usage of the i-PRO Active Guard server. CPU usage and Memory usage show the total value in the PC and i-PRO Active Guard server. Data for one hour from specified date is shown. Select date and [Get] for previous date (within 31 days can be shown). These data can be used to check whether PC performance is stable after installation or investigation of the system trouble.

Note) Data may not be shown correctly when PC is power off or i-PRO Active Guard server software is stopped for some duration.

Process Control

Processes related to i-PRO Active Guard server can be restarted or stopped. When the system is running, please check all processes show “running” or “not used”.

(The number of used “AI Camera Stream Process x” depends on the number of registered cameras.)

When it is required to restart PC, check [Multi AI Camera Service] and [MultiAI Support Process Management Service] are stopped (also see 5.6.1).

When investigation to system trouble is required, please check status and try to [Restart].

4.1.8.3. Diagnosis

Camera Connection 4 | 0

Server Status Process Database Disk Free:196.6/476GB

Diagnosis Total Best shot Images: 93632
Total Alarm History: 29733
(2021/06/16 19:45)

Record summary Date

IP address	16th Jun	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
192.168.0.30	1046	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	347
192.168.0.31	395	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
192.168.0.32	2156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	668
192.168.0.33	308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36

Information

System version:1.0.0 OS:Windows 10 Pro, version 1903, build 18362.387 Tamper Protection: invalid Virtual memory: 4864MB
Web version:- CPU:Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz Fastboot: valid Windows update:invalid

Record summary

Record summary shows the number of received data from each camera on the specified date. Selectable items depend on the registered camera and AI application.

*Selectable items

- All Best shot images
- Face Best shot images
- People Best shot images
- Vehicle Best shot images
- License plate images
- Code images
- Container images
- All alarm
- Registered face detection
- Registered people detection
- AI-VMD
- Sound detection
- AI Occupancy detection
- Registered vehicle detection
- AI Scene Change detection
- Registered license plate detection (*1)
- Unregistered license plate detection (*1)
- Registered code detection (*2)

- Unregistered code detection (*2)
- Registered Container detection (*3)
- Unregistered Container detection (*3)

(*1) About license plate detection.

- Registered license plate detection

You will be notified when you set watchlist to below settings on i-PRO Active Guard plug-in.

- Set "Detect by vehicle appearance only" to off,
and set "Trigger" to "When license plates in the selected group was detected."

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

- Unregistered License plate detection

You will be notified when you set watchlist to below settings on i-PRO Active Guard plug-in.

- Set "Detect by vehicle appearance only" to off,
and set "Trigger" to "When other license plate which is not in the selected group was detected."

(*2) About code detection.

- Registered code detection

You will be notified when you set OCR watchlist to below settings on i-PRO Active Guard plug-in.

- Set "Trigger" to "When OCR Code in the selected group was detected."

- Unregistered Code detection

You will be notified when you set OCR watchlist to below settings on i-PRO Active Guard plug-in.

- Set "Trigger" to "When other OCR Code which is not in the selected group was detected."

(*3) About container detection.

- Registered container detection

You will be notified when you set Container watchlist to below settings on i-PRO Active Guard plug-in.

- Set "Detect by container details" to off and set "Trigger" to "When Container code in the selected group was detected."

- Set "Detect by container details" to on.

- Unregistered container detection

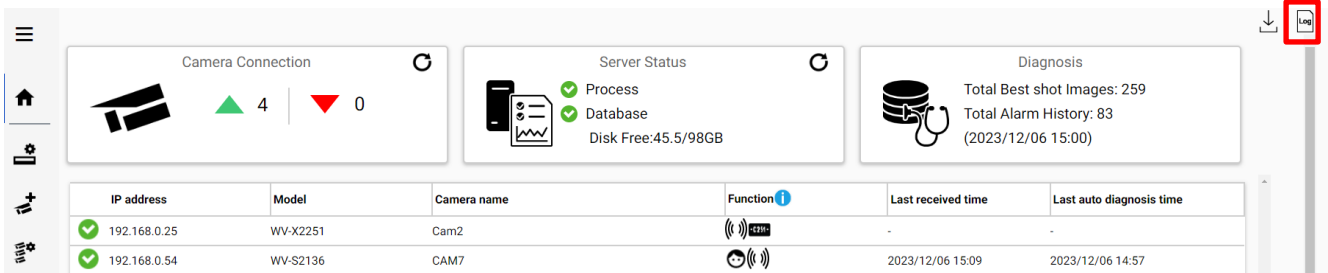
You will be notified when you set Container watchlist to below settings on i-PRO Active Guard plug-in.

- Set "Detect by container details" to off,
and set "Trigger" to "When other Container code which is not in the selected group was detected."

Information


Software version, OS, windows configuration is shown.

4.1.8.4. Display log



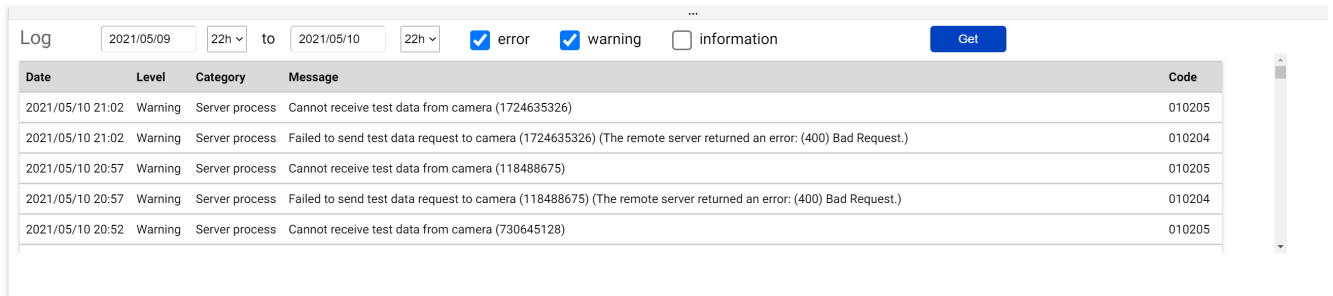
The dashboard overview includes three main sections: Camera Connection (4 green, 0 red), Server Status (Process and Database OK, Disk Free: 45.5/98GB), and Diagnosis (Total Best shot Images: 259, Total Alarm History: 83). Below these is a table of camera connections.

IP address	Model	Camera name	Function	Last received time	Last auto diagnosis time
192.168.0.25	WV-X2251	Cam2		-	-
192.168.0.54	WV-S2136	CAM7		2023/12/06 15:09	2023/12/06 14:57

Click  to show logs.

Overview of system error can be displayed. Select date and error level ([error], [warning] and [information]) and click [Get].

Detail for each message and troubleshoot for Code is shown on 6 Troubleshooting.



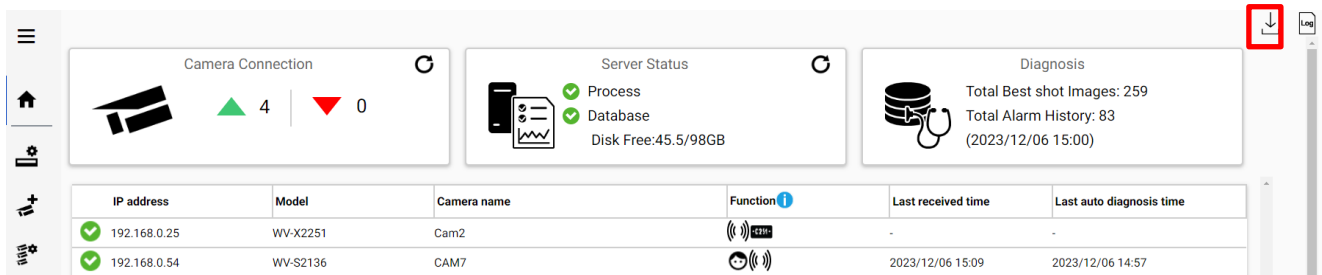
The log display interface includes filters for date (2021/05/09 to 2021/05/10), time (22h), and level (error, warning, information). A 'Get' button is present. The log entries are as follows:

Date	Level	Category	Message	Code
2021/05/10 21:02	Warning	Server process	Cannot receive test data from camera (1724635326)	010205
2021/05/10 21:02	Warning	Server process	Failed to send test data request to camera (1724635326) (The remote server returned an error: (400) Bad Request.)	010204
2021/05/10 20:57	Warning	Server process	Cannot receive test data from camera (118488675)	010205
2021/05/10 20:57	Warning	Server process	Failed to send test data request to camera (118488675) (The remote server returned an error: (400) Bad Request.)	010204
2021/05/10 20:52	Warning	Server process	Cannot receive test data from camera (730645128)	010205

Note)


Maximum 1000 logs can be shown at the same time.

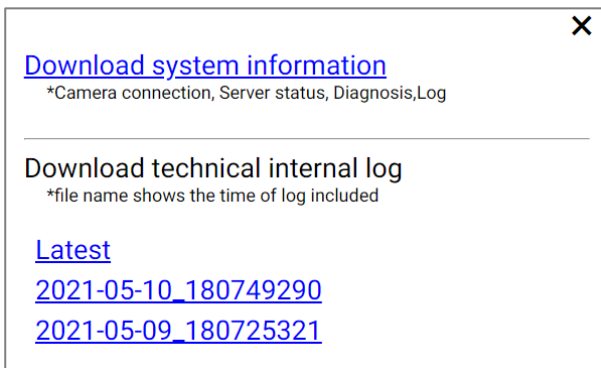
4.1.8.5. Download log



The screenshot shows a dashboard with three main sections: Camera Connection, Server Status, and Diagnosis. The Camera Connection section shows 4 green triangles and 0 red triangles. The Server Status section shows Process and Database as green checkmarks and Disk Free: 45.5/98GB. The Diagnosis section shows Total Best shot Images: 259 and Total Alarm History: 83 (2023/12/06 15:00). Below these sections is a table with columns: IP address, Model, Camera name, Function, Last received time, and Last auto diagnosis time. A red box highlights a download icon in the top right corner of the dashboard.

IP address	Model	Camera name	Function	Last received time	Last auto diagnosis time
192.168.0.25	WV-X2251	Cam2		-	-
192.168.0.54	WV-S2136	CAM7		2023/12/06 15:09	2023/12/06 14:57

Click  to download log.



The dialog box has a close button (X) in the top right corner. It contains the following text:

[Download system information](#)
*Camera connection, Server status, Diagnosis, Log

Download technical internal log
*file name shows the time of log included

[Latest](#)
[2021-05-10_180749290](#)
[2021-05-09_180725321](#)

Download system information

Download Camera Connection, Server Status, Diagnosis and Log loaded on screen as json format.

Download technical internal log

Download detail log. File name “yyyy-mm-dd_hhmmssfff” shows the time of log included. Log files are zipped automatically depending on the duration or size and the filename shows the time zipped.

Ex. “2021-05-10_180749290” includes logs from 2021-05-09 18:07:25.321 to 2021-05-10 18:07:49.290 on this example.

4.1.9. Windows setting

Following Windows configuration is required for i-PRO Active Guard server's work to be stable.
Location of configuration may differ depending on OS.

4.1.9.1. Disable Real-time protection and Tamper protection

This is required for i-PRO Active Guard server to keep the basic performance.

In case of Windows 10,

(Start – Settings – System – Update & Security – Windows Security – Virus & threat protection – Virus & threat protection - Virus & threat protection settings – Manage settings)

Off the “Real-time protection” and “Tamper protection”.

Windows server OS does not have Tamper protection feature.

4.1.9.2. Disable Windows Update service

Windows updates are important to keep the system up to date, but auto update may require an unplanned restart and some a Windows feature may influence the i-PRO Active Guard server. To avoid unplanned restarts or influences, disable Windows update service.

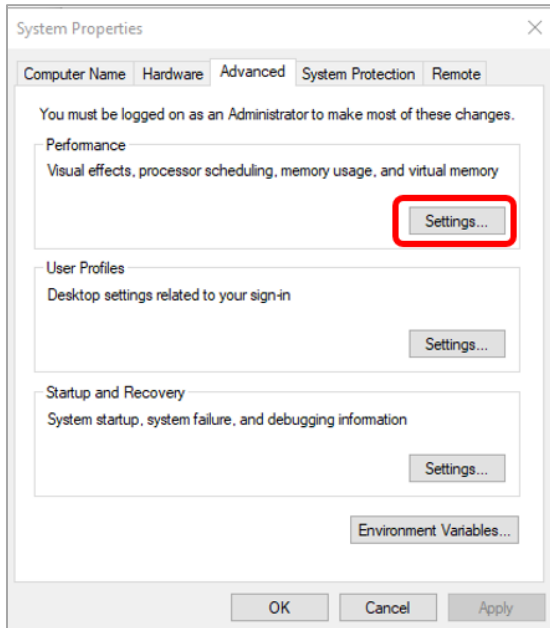
In case of Windows 10,

Start – Windows Administrative Tools – Services – right click “Windows Update” – Properties – select “Disabled” for “Startup type” and click OK.

4.1.9.3. Virtual memory setting

If the virtual memory is insufficient, the database may stop.

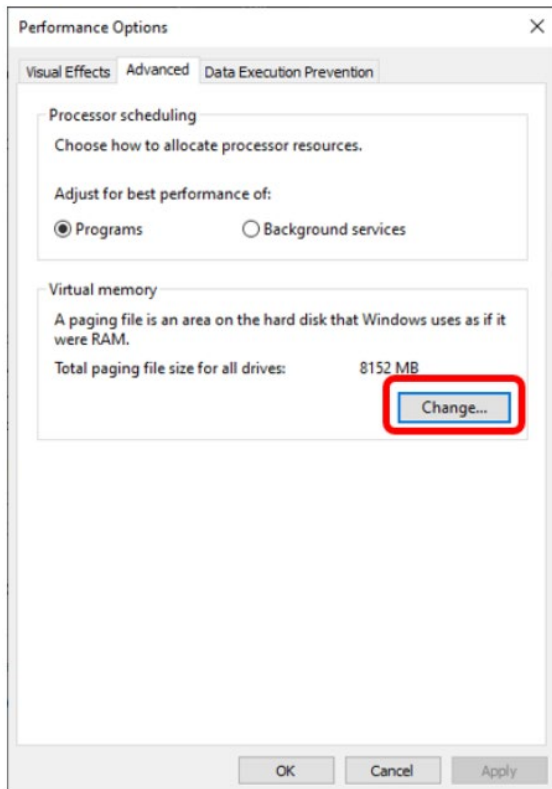
Follow the procedures below to check the virtual memory setting.



In case of Windows 10,

Start – Windows System – Control Panel – System and Security – System – Advanced system setting

Select Settings



Select “Advanced” tab on “Performance Options” screen and click “Change...” button of Virtual memory.

Confirm that “Automatically manage paging file size for all drives” is checked on “Virtual Memory” screen. Check it and click “OK” button.

4.2. Install and setup Plug-in

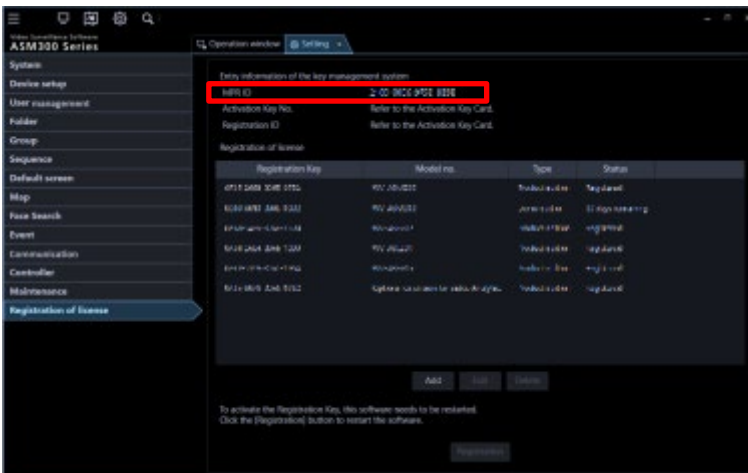
4.2.1. Obtain the Registration Key

This product needs to be activated by “Registration Key” issued by Key Management System before you start using. Follow the steps below to obtain the Registration Key.

STEP1

Start Operation Software of WV-ASM300 and login as administrator.

Confirm [MPRID] from WV-ASM300 [Setting] – [Registration of license].



STEP2 Sign up

Access the URL for PC below and login.

<https://kms-business.i-pro.com/ipkms/pc/home.htm>

Important:

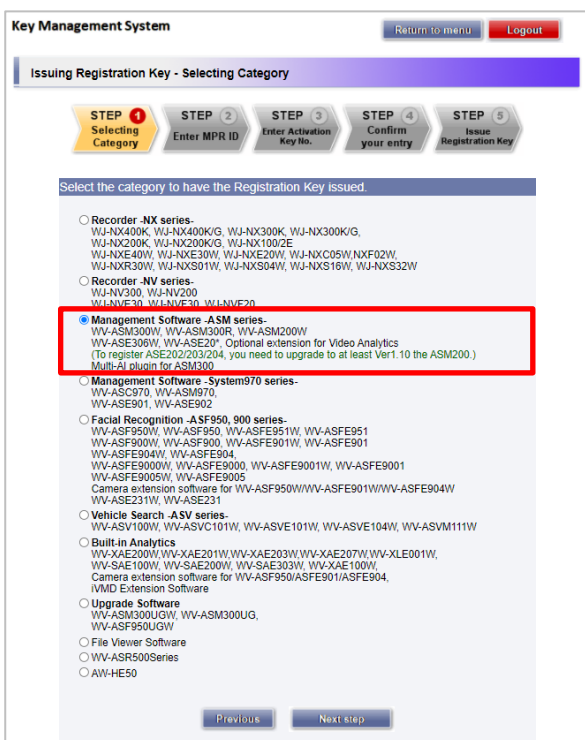
- Key Management System may not be able to be accessed during server maintenance. Please create your User ID and password, if it is the first time to access this system. Please login as a temporary user using following User ID and password written on the web page.

STEP3 Get activation key

Click [Issue Registration Key] button.



Select [Management Software -ASM series-] and follow the instructions on the screen to proceed.



[Activation Key No.] and [Registration ID] are as follows.

[Activation Key No.]: 0936-0065-0022-0208

[Registration ID]: B6B0-EACC

4.2.2. Install Plug-in and license registration

Download the installer from

https://i-pro.com/products_and_solutions/en/surveillance/learning-and-support/knowledge-base/product-tips/active-guard-links

Installation and configuration can be done from WV-ASM300.

STEP1

Execute **“EnablePlugin.exe”** included in downloaded folder.

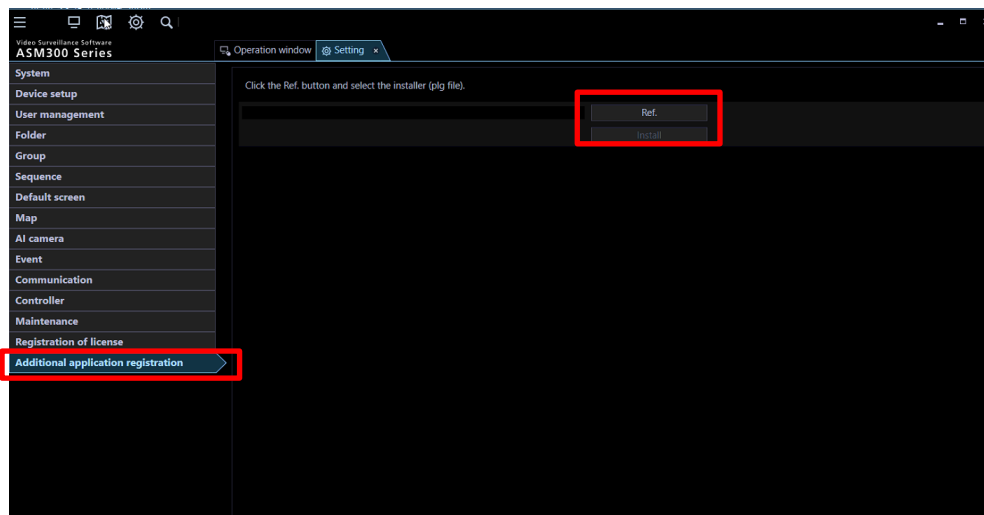
STEP2

Start Operation Software of WV-ASM300 and login as administrator.

Open setting window.

STEP3

Select [Additional application registration]. Click [Ref.], select downloaded file **“MultiAIPlugin.plg”** and click [install].

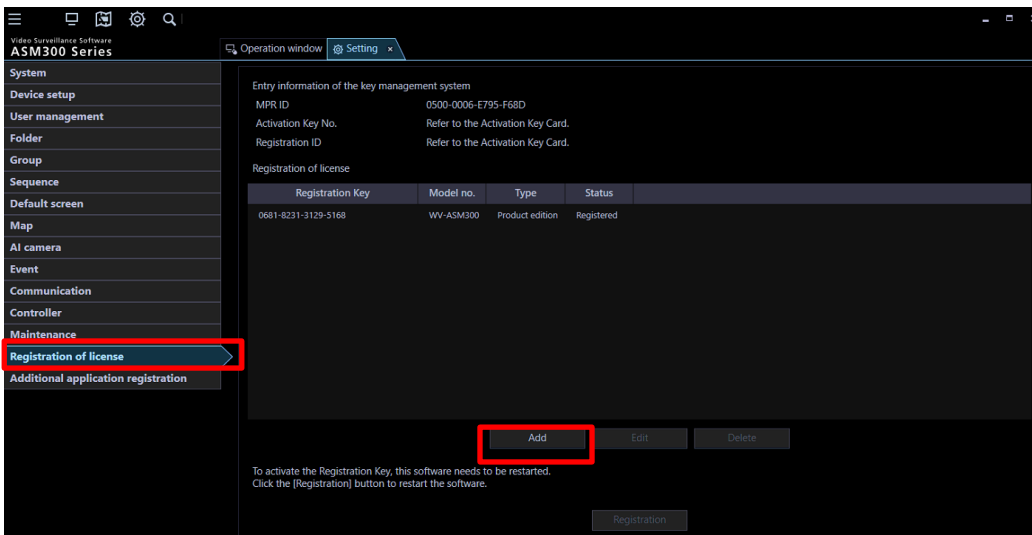


STEP4

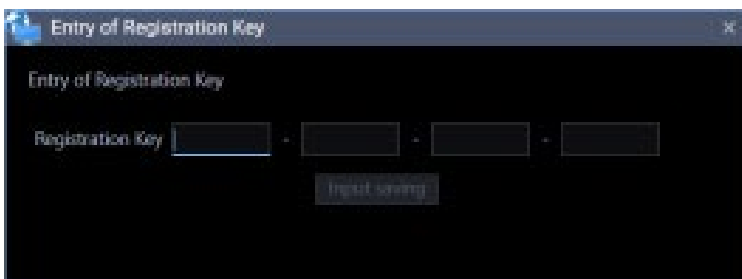
Follow the instructions on the screen to proceed with the installation.

STEP5

Select [Registration of license] and click [Add].



Input [Registration Key] obtained in 4.2.1 and click [Input saving]

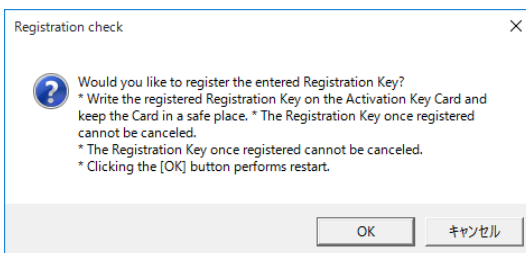


STEP6

Click the [Registration] button after confirming the information of the entered "Registration Key".

STEP7

Click the [OK] button. To cancel registration, click the [Cancel] button.



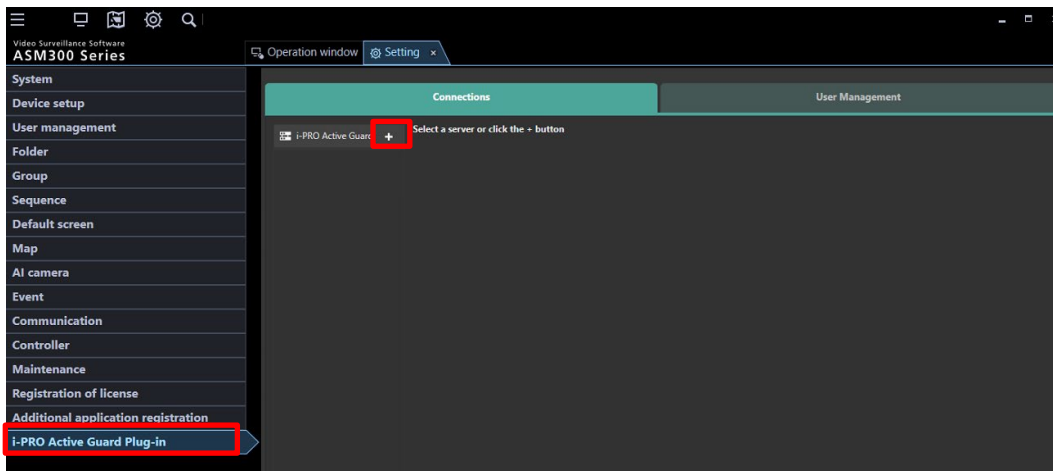
Important:

- [Registration Key] is valid only on the PC on which the MPR ID entered in the key management system is displayed. Cannot be used on other PCs.
- It is impossible to deactivate the "Registration Key" once registered. Confirm that registration is correct.
- When the [OK] button is clicked, this software will be automatically restarted.

4.2.3. Connection to i-PRO Active Guard server

STEP1

Select [i-PRO Active Guard Plug-in] from [Setting] and click [+] button.

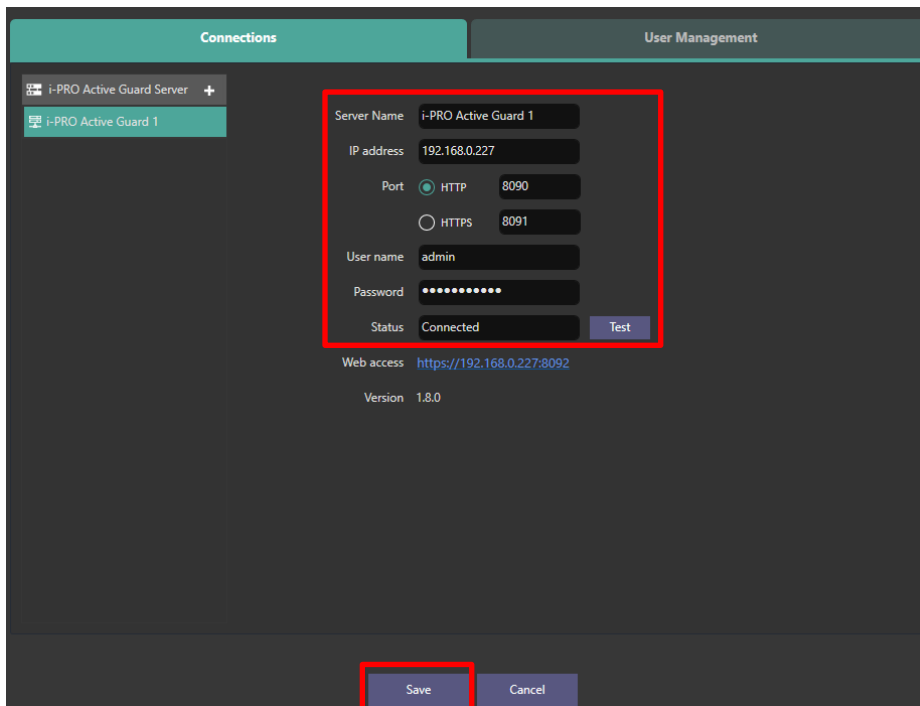


STEP2

Input i-PRO Active Guard server information and click [Test].

For the [User name] and [Password], enter the administrator user name and password set when installing (4.1.1). For the [Port], enter the port number when installing.

If [Connected] is shown for [Status], click [Save].

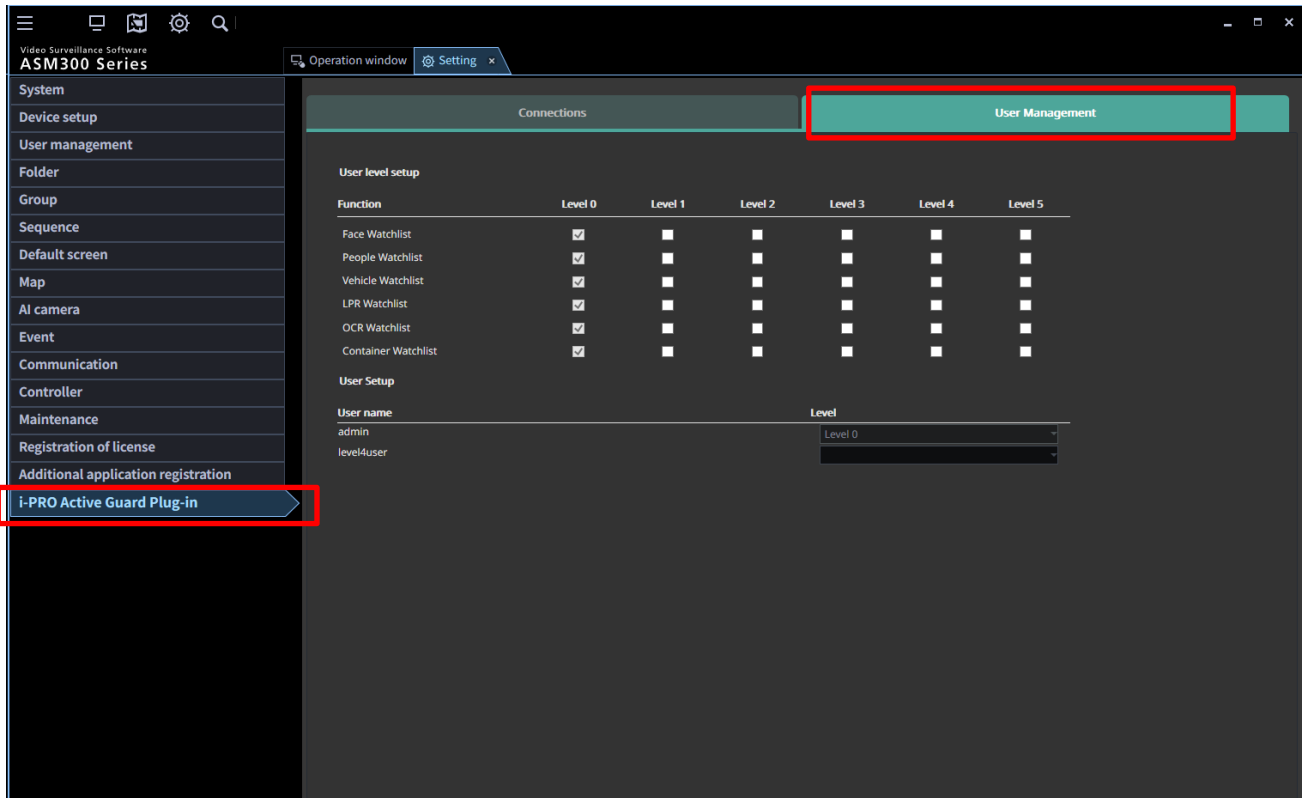


Note)

Up to 100 i-PRO Active Guard server can be registered.

4.2.4. User Management (Optional)

Configure [User Management] for access to watchlist such as [Face Watch list] and [People Watchlist] and [Vehicle Watchlist] ,etc. for each user or group..



Some Plug-in's function has relation to [User level setup] or [User setup] on WV-ASM300 setting. If these setting is disabled on WV-ASM300, corresponding Plug-in function cannot be used.

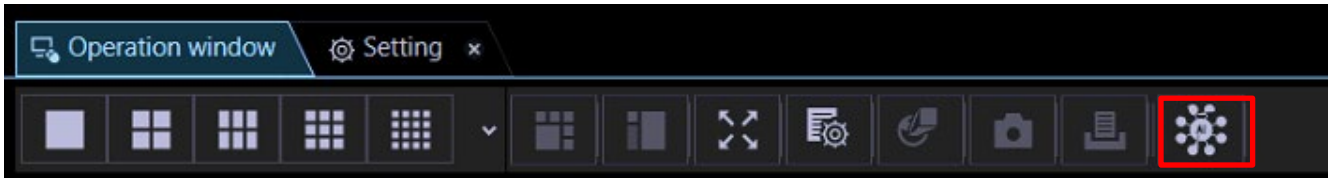
User level setup / User level setup on WV-ASM300	Related functions of Plug-in
Recorder control	All search and receive alarm functions of both i-PRO Active Guard Search and i-PRO Active Guard Event.
Display the alarm log	All functions of i-PRO Active Guard Event.
Print/Save as a still picture	Snapshot
Download	Export video and output search result
Alarm reset/error reset	Change alarm status button in playback window.
Displayable map	Map display in camera selection and playback window.

4.2.5. Check

If WV-ASM300 is running, close it and then start it again.

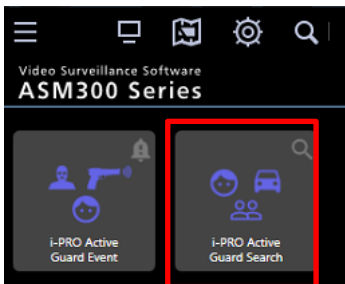
STEP1

Open WV-ASM300 Operation window and click Plug-in icon.



STEP2

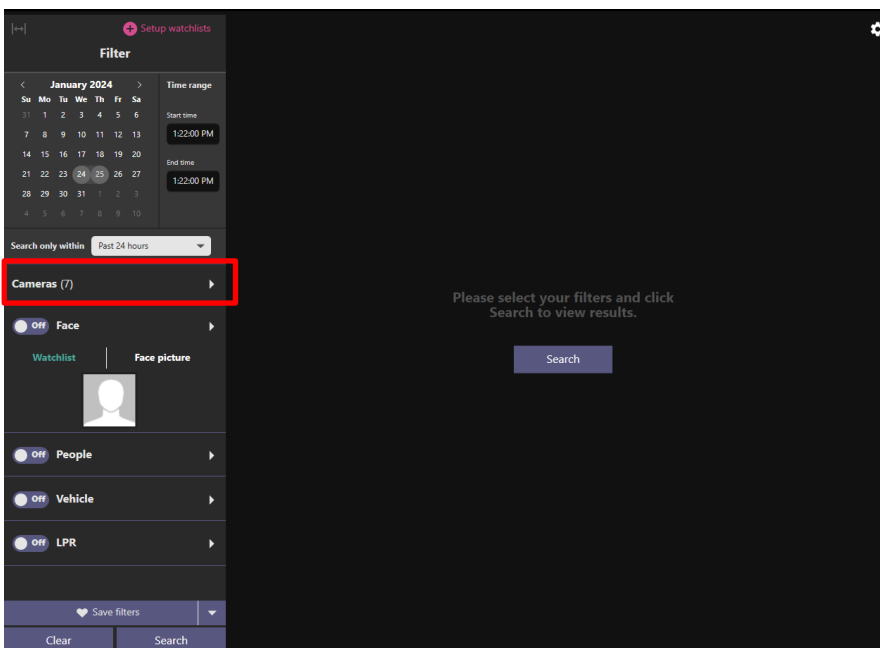
Click [i-PRO Active Guard Search]



STEP3

When the number is shown for "Cameras (x)", Connection succeeded.

* x means the number of camera that Face, People, Vehicle or etc. extension software is installed.



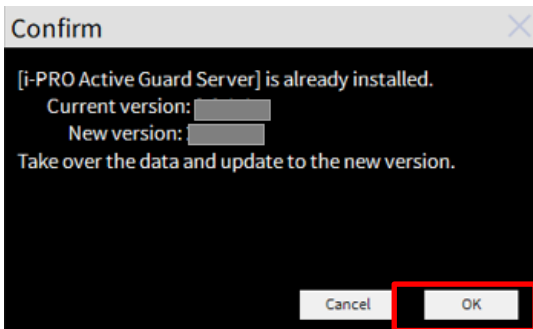
When some camera has detected object, you can search Best shot images by clicking Search.

4.3. Upgrade i-PRO Active Guard server

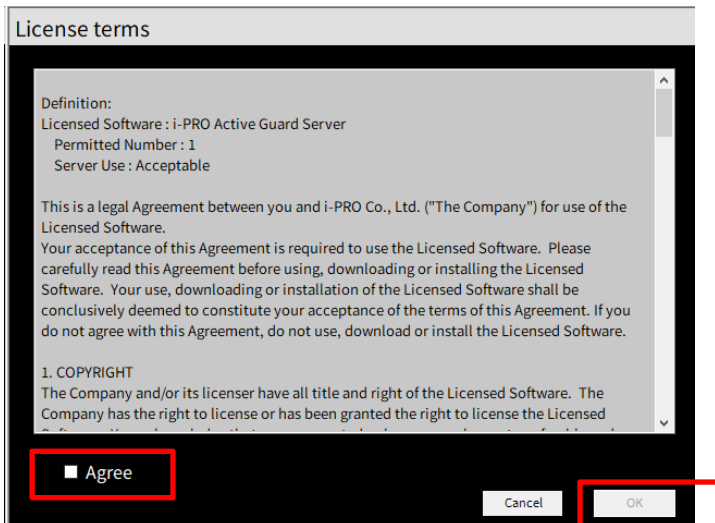
Important:

- When upgrading the version of i-PRO Active Guard server, do not uninstall the already installed version. If you uninstall it, you will not be able to use the past data.

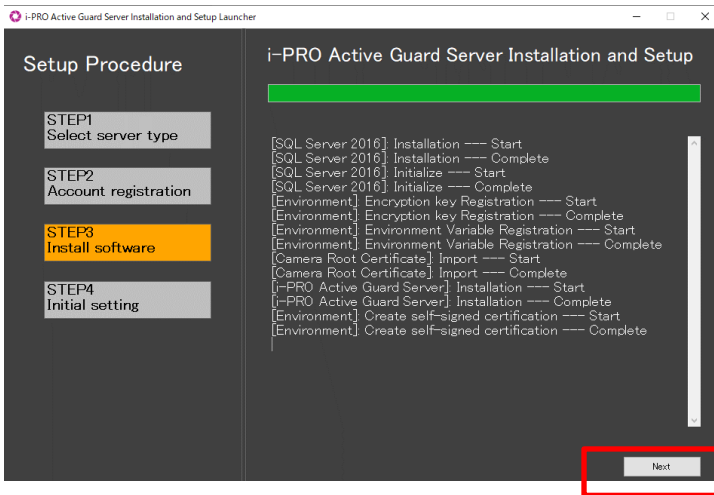
Execute **"MultiAStartup.exe"** as administrator (file path length must be less than 119).



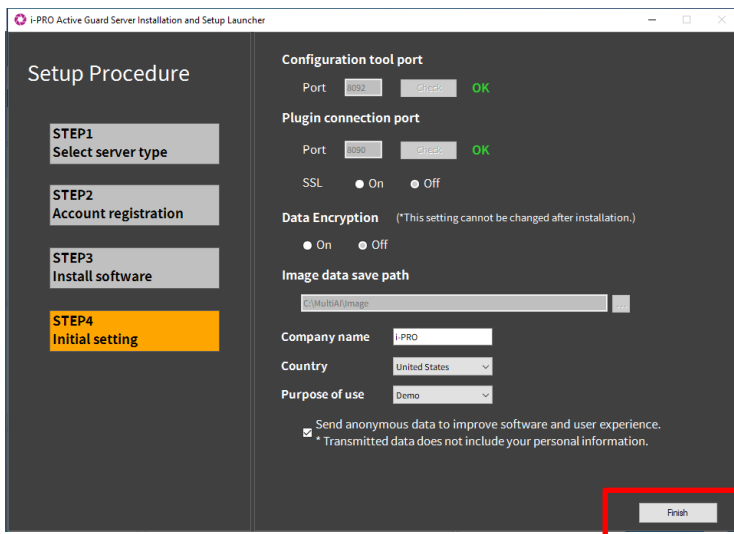
Confirm the version and click [OK].



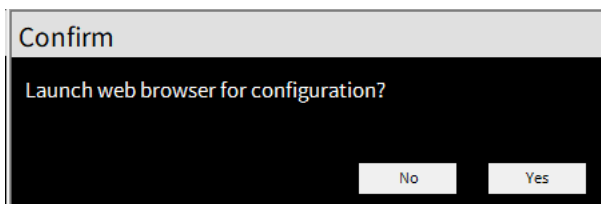
Check for [Agree] for License terms and [OK].



Installation starts and [Next] button will be appeared when finished. Click [Next].



Click [Finish].



A dialog box will appear asking about launch web browser.

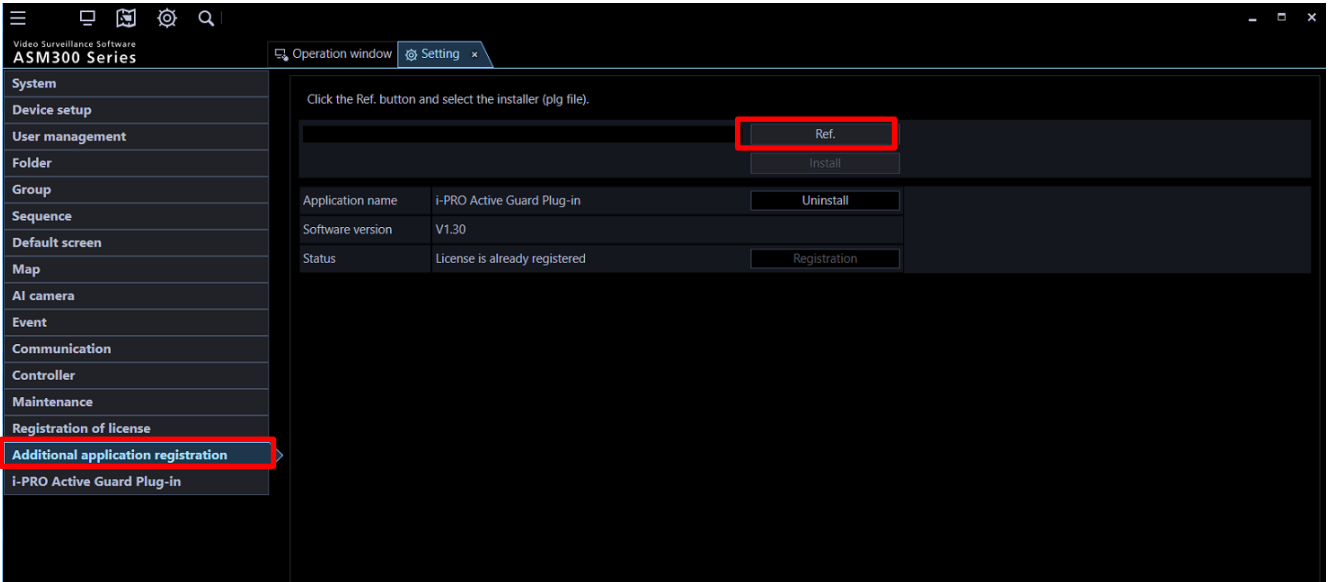
Please make your selection as necessary.

4.4. Upgrade Plug-in

STEP1

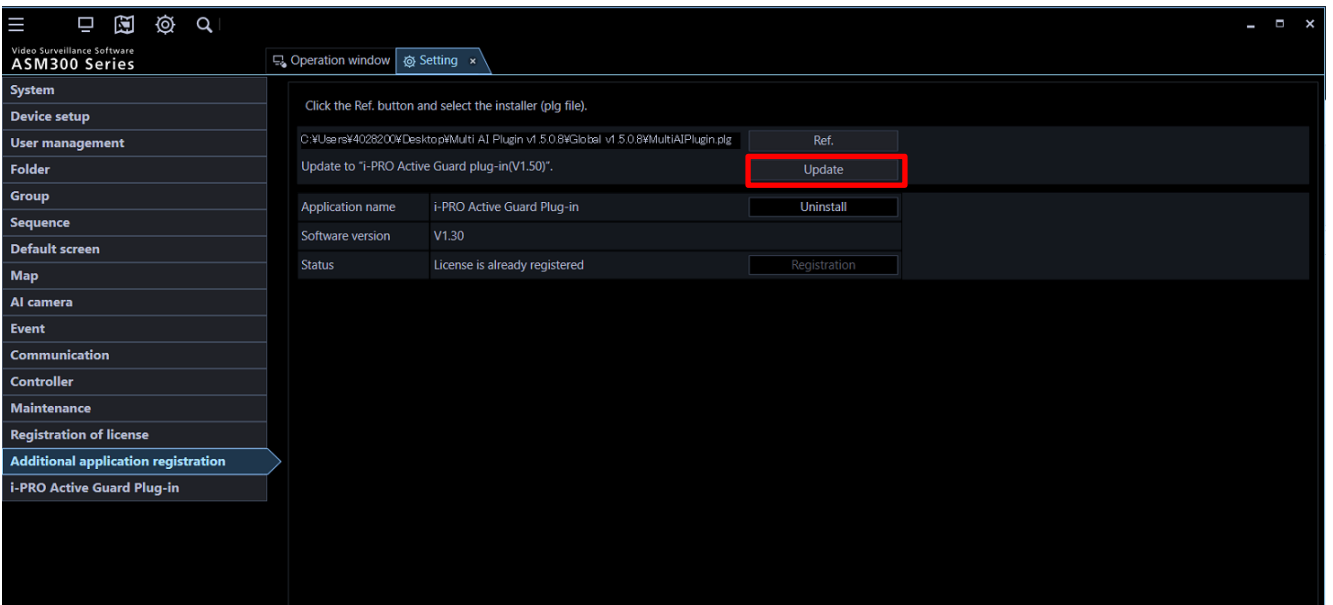
Start Operation Software of WV-ASM300 and login as administrator.

Open [Setting] - [Additional application registration] and click [Ref.], select downloaded file “MultiAIPlugin.plg”.



STEP2

Click [Update] and follow the instructions on the screen to proceed with the installation.



5. When changing system component

5.1. Add system device

5.1.1. Add recorder

STEP1

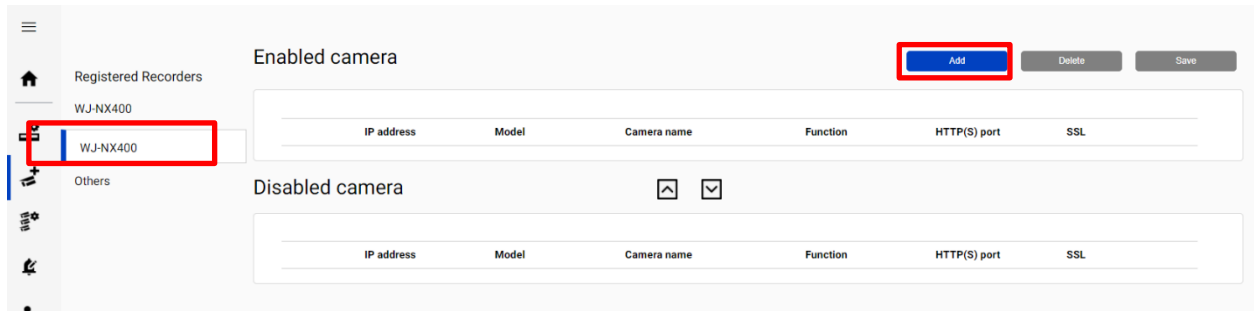
Register recorder to WV-ASM300.

STEP2

Add recorder to i-PRO Active Guard server. (Refer to 4.1.2.2).

STEP3

Register cameras associated with new recorder to i-PRO Active Guard server (Refer to 4.1.2.3).



STEP4

Restart process (Refer to 4.1.3)

STEP5

If WV-ASM300 is running, close it and then start it again.

5.1.2. Add camera to registered recorder

STEP1

Register camera to recorder and update registered device information in WV-ASM300.

STEP2

Register cameras to i-PRO Active Guard server (Refer to 4.1.2.3)

STEP3

Restart process (Refer to 4.1.3)

STEP4

If WV-ASM300 is running, close it and then start it again.

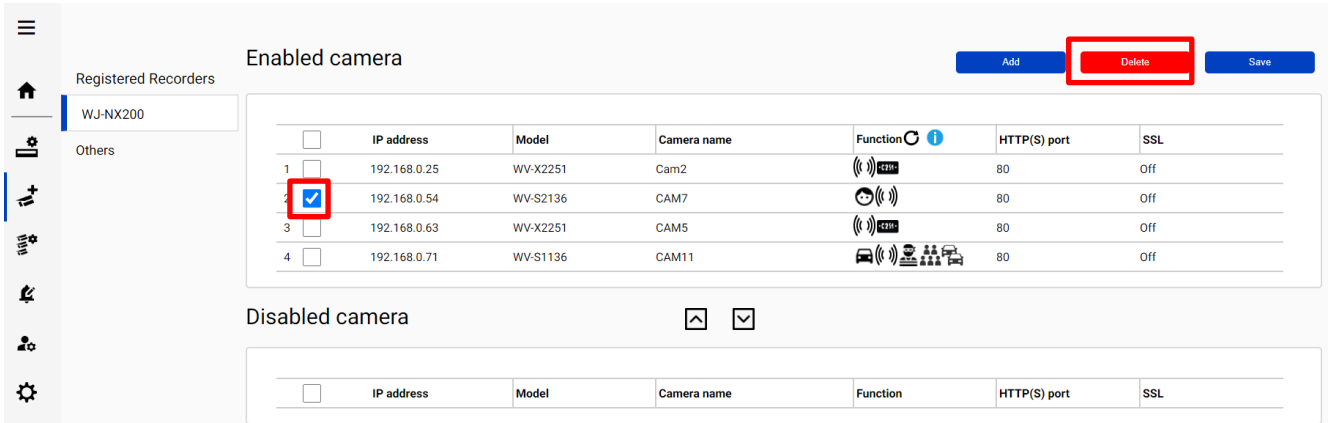
5.2. Delete system device

5.2.1. Delete camera

STEP1

Check camera and [Delete] from Register Cameras screen.

Existing data of the selected camera will be unavailable.



The screenshot shows the 'Register Cameras' interface. On the left, there is a sidebar with navigation icons. The main area is titled 'Enabled camera' and contains a table with the following data:

	<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
1	<input type="checkbox"/>	192.168.0.25	WV-X2251	Cam2		80	Off
2	<input checked="" type="checkbox"/>	192.168.0.54	WV-S2136	CAM7		80	Off
3	<input type="checkbox"/>	192.168.0.63	WV-X2251	CAM5		80	Off
4	<input type="checkbox"/>	192.168.0.71	WV-S1136	CAM11		80	Off

Below the 'Enabled camera' table is a section for 'Disabled camera' with two empty rows and a table header:

	<input type="checkbox"/>	IP address	Model	Camera name	Function	HTTP(S) port	SSL
	<input type="checkbox"/>						
	<input type="checkbox"/>						

At the top right of the main area, there are three buttons: 'Add', 'Delete' (highlighted in red), and 'Save'.

STEP2

Restart process (Refer to 4.1.3)

5.2.2. Disable camera

When you want to disable specific cameras temporarily, which means there is a possibility you want to search existing data of the camera later, configure the camera as Disabled camera.

STEP1

Check camera and move to Disabled camera from Register Cameras screen.

Existing data of the selected camera will be unavailable as long as the camera is disabled camera.

The screenshot shows the 'Registered Recorders' interface. On the left, there is a sidebar with navigation icons and a menu with 'Registered Recorders' and 'Others'. The main area is titled 'Enabled camera' and contains a table with columns: IP address, Model, Camera name, Function, HTTP(S) port, and SSL. The table has four rows. The second row, for camera 'CAM7' (IP: 192.168.0.54, Model: WV-S2136), has a red box around its selection checkbox. Below the 'Enabled camera' table is a 'Disabled camera' section with an upward arrow icon and a red box around a downward arrow icon. Below that is an empty table with the same columns as the 'Enabled camera' table.

	IP address	Model	Camera name	Function	HTTP(S) port	SSL
1	192.168.0.25	WV-X2251	Cam2		80	Off
2	192.168.0.54	WV-S2136	CAM7		80	Off
3	192.168.0.63	WV-X2251	CAM5		80	Off
4	192.168.0.71	WV-S1136	CAM11		80	Off

	IP address	Model	Camera name	Function	HTTP(S) port	SSL
--	------------	-------	-------------	----------	--------------	-----

STEP2

[Save]

The screenshot shows the 'Registered Recorders' interface. The 'Enabled camera' table now has three rows. The second row, for camera 'CAM5' (IP: 192.168.0.63, Model: WV-X2251), has a red box around its selection checkbox. The 'Disabled camera' section now has an upward arrow icon and a downward arrow icon. Below that is a table with one row for camera 'CAM7' (IP: 192.168.0.54, Model: WV-S2136), which has a red box around its selection checkbox. The 'Save' button in the top right corner of the 'Enabled camera' section is highlighted with a red box.

	IP address	Model	Camera name	Function	HTTP(S) port	SSL
1	192.168.0.25	WV-X2251	Cam2		80	Off
2	192.168.0.63	WV-X2251	CAM5		80	Off
3	192.168.0.71	WV-S1136	CAM11		80	Off

	IP address	Model	Camera name	Function	HTTP(S) port	SSL
1	192.168.0.54	WV-S2136	CAM7		80	Off

STEP3

Restart process (Refer to 4.1.3)

When you want to use the camera and existing data of the camera again, move to Enabled camera and [Save].

Existing data of the camera will be available as long as retention period is not exceeded from Plug-in.

5.2.3. Delete recorder

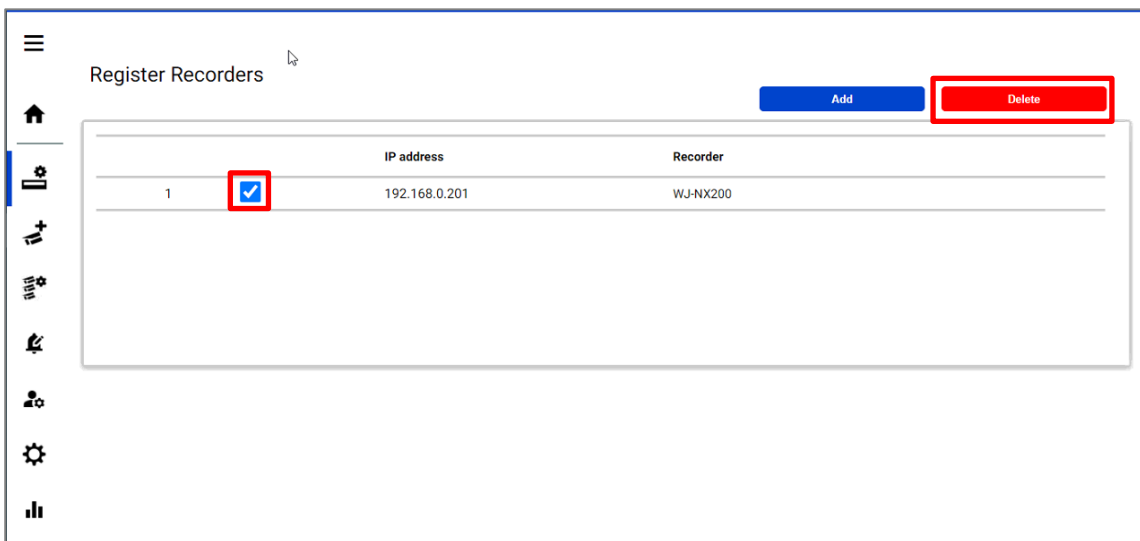
STEP1

Check server and [Delete] from Register Recorder screen.

Cameras belonged to the selected server are also deleted and exiting data will not be used from Plug-in and dashboard.

When the same recorder and camera is registered again, existing data becomes available as long as retention period is not exceeded from Plug-in.

Best shot images and related database will be deleted when retention period exceed.



STEP2

Restart process (Refer to 4.1.3)

5.3. Update registered camera's information

Important:

• After changing the settings (*) of a camera registered on i-PRO Active Guard server, follow the steps in this chapter to update server's camera information.

If you want to change the "IP address", please refer to 5.5.

* The settings are below.

- Camera's settings. (ex. IP address, Camera name)
- Camera's extension software settings.
(ex. Installing and uninstalling camera's extension software, Line name of AI-VMD)

5.3.1. Update camera and extension software settings

STEP1

Change settings.

STEP2

Click [Camera(s) from Recorder] on Register Cameras screen (4.1.2.3).

Select the camera, [Check].

Confirm the icons for [Check result] is changed depending on the extension software and click [Register].

STEP3

Restart process (Refer to 4.1.3)

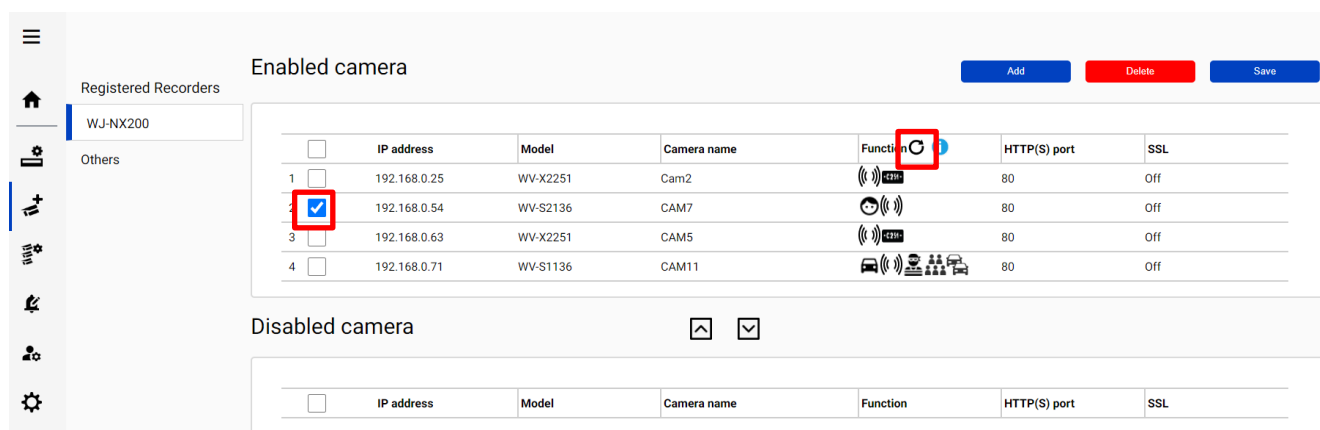
5.3.2. Update extension software settings

STEP1





Change extension software settings.

STEP2

Check the target camera and click  on Register Cameras screen.



The screenshot shows the 'Registered Recorders' interface. On the left, there is a sidebar with navigation icons. The main area is titled 'Registered Recorders' and contains a sub-section 'Enabled camera' with 'Add', 'Delete', and 'Save' buttons. Below this is a table with columns: IP address, Model, Camera name, Function, HTTP(S) port, and SSL. The second row (CAM7) has a blue checkmark in the selection column and a refresh icon in the Function column, both highlighted with red boxes. Below the table is a 'Disabled camera' section with two checkboxes.

	IP address	Model	Camera name	Function	HTTP(S) port	SSL
1	192.168.0.25	WV-X2251	Cam2		80	Off
2	192.168.0.54	WV-S2136	CAM7		80	Off
3	192.168.0.63	WV-X2251	CAM5		80	Off
4	192.168.0.71	WV-S1136	CAM11		80	Off

Note)

This function cannot update camera's settings. (ex. IP address, Camera Name)
If there is an abnormal value, please try update using method 5.3.1

STEP3

Confirm the icons for [Function] is changed depending on the extension software.

5.4. Uninstall the system

5.4.1. Uninstall Plug-in from client PC

STEP1

Select [Additional application registration] and Click [Uninstall] for “i-PRO Active Guard Plug-in”.

STEP2

Follow the instructions on the screen to proceed with the uninstallation.

STEP3

Execute [DisablePlugin.bat] included in downloaded folder.

5.4.2. Uninstall i-PRO Active Guard server

STEP1

Open the Programs and Features window (from the Control Panel).

STEP2

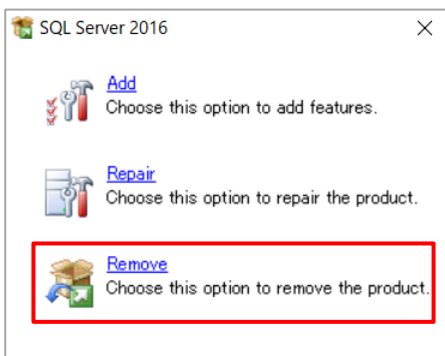
Find [Multi AI Plugins – Server] and [Uninstall].

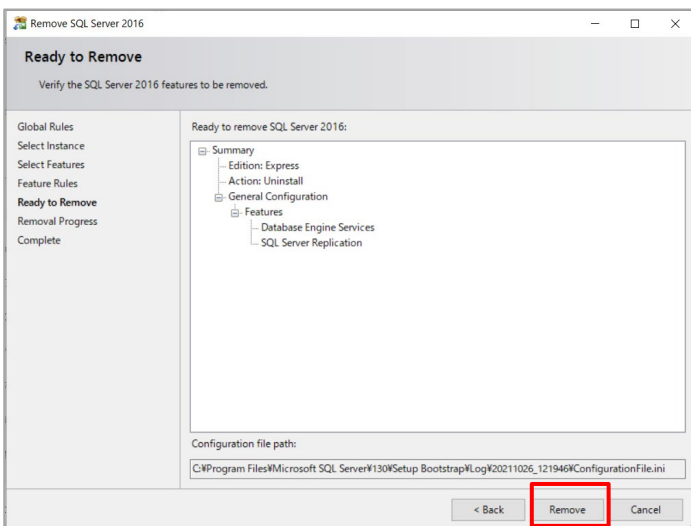
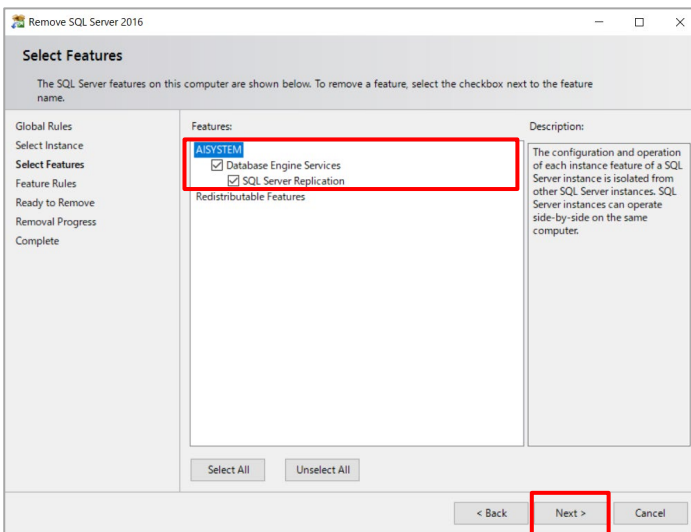
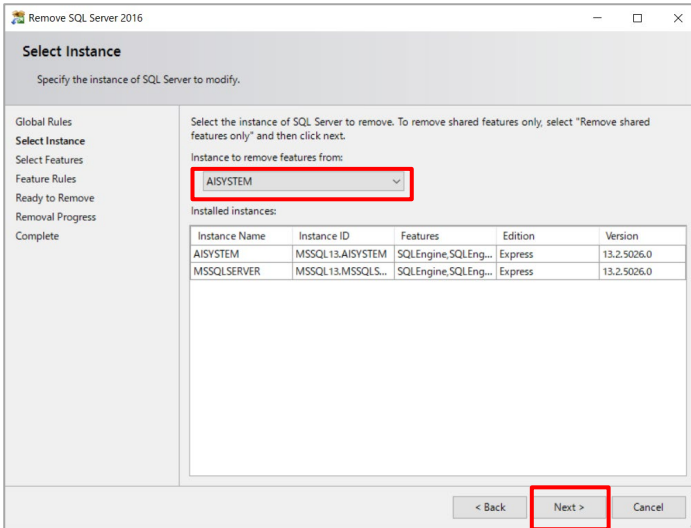
Delete “C:\MultiAI” folder if exist.

STEP3

Find [Microsoft SQL Server 2016 (64 bit)] or [Microsoft SQL Server 2019 (64 bit)] and [Uninstall].

Select [Remove] and delete “AISYSTEM” instance.





Note)

- SQL server instance that VMS uses is not deleted. Only instance for i-PRO Active Guard server is deleted.

STEP4

Delete “C:\Program Files\Microsoft SQL Server\MSSQL13.AYSYSTEM” folder or
“C:\Program Files\Microsoft SQL Server\MSSQL15.AYSYSTEM” folder.

Note)

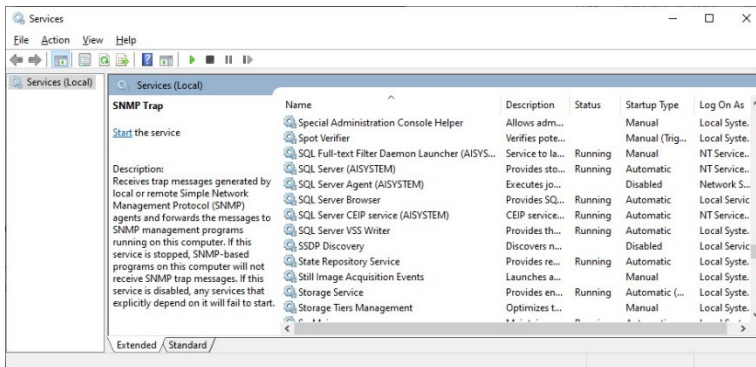
If any of the following services remain after uninstallation, please remove them manually.

- SQL Full-text Filter Daemon Launcher (AISYSTEM)
- SQL Server (AISYSTEM)
- SQL Server Agent (AISYSTEM)
- SQL Server CEIP service (AISYSTEM)

(1) How to display services

Please start the service application in the following folder

C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Administrative Tools

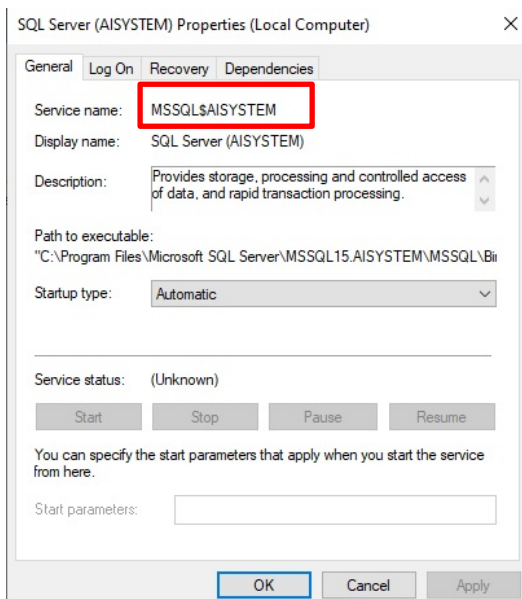


(2) How to delete a service

Start a command prompt as an administrator user and execute the following command.

sc delete “xxx”

“xxx” is the Service name that appears when the target is double-clicked.



e.g.) SQL Server (AISYSTEM)

sc delete MSSQL\$AISYSTEM

5.5. Change IP address

5.5.1. Change camera's IP address

STEP1

Change camera's IP address, update recorder and WV-ASM300 registration.
Please refer the manual for each software.

STEP2

Delete the camera from i-PRO Active Guard server (Refer to 5.2.1)

STEP4

Register the camera again (Refer to 4.1.2.3).

STEP5

Restart process (Refer to 4.1.3).

5.5.2. Change recorder's IP address

STEP1

Change Recorder's IP address and update and WV-ASM300 registration.
Please refer the manual for each software.

STEP2

Delete the recorder from i-PRO Active Guard server (Refer to 5.2.3)

STEP3

Register the recorder again (Refer to 4.1.2.2).

STEP4

Restart process (Refer to 4.1.3).

5.5.3. Change i-PRO Active Guard server's IP address

Existing recorded data and Best shot images are available after changing IP address.

STEP1

Change i-PRO Active Guard server's IP address.

STEP2

Update configuration for Connection to i-PRO Active Guard server from Plug-in (4.2.3).

5.6. Data backup and restore

Image data and related database can be backed-up manually. It is important to note that the reinstallation of i-PRO Active Guard server requires the same version of software for reinstallation from backup due to differences in each database version.

5.6.1. Backup process

STEP1

Start – Windows Administrative Tools – Task Scheduler. Right click and disable “AliveMonitoringProcess”

STEP2

Start – Windows Administrative Tools – Services.

Right click and stop for “MultiAICameraService”, “MultiAISupportProcessManagementService” and “SQL Server(AISYSTEM)”, respectively.

STEP3

Browse to SQL Server data save path.

Copy “ai_db.mdf”, “aicam.mdf”, “support_db.mdf”, “ai_db_log.ldf”, “aicam_log.ldf”, “support_db_log.ldf”, “bi.mdf” and “bi_log.ldf” to safe location (i.e.: a USB drive, a NAS device, another server, etc.).

SQL Server data save path is below:

SQL server 2016

“C:\Program Files\Microsoft SQL Server\MSSQL13.AISYSTEM\MSSQL\DATA”

SQL server 2019

“C:\Program Files\Microsoft SQL Server\MSSQL15.AISYSTEM\MSSQL\DATA”

STEP4

Copy “C:\MultiAI\Image” folder to safe location. If you changed image data save path, copy the folder.

Copy “C:\MultiAI\Backup” folder to safe location.

STEP5

Type “regedit” to Start menu and run. Right click two folder and export to safe location, respectively.

“\HKEY_LOCAL_MACHINE\SOFTWARE\Panasonic\AiSystem” or

“\HKEY_LOCAL_MACHINE\SOFTWARE\i-PRO\AiSystem”.

“\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Panasonic\AiSystem” or

“\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\ i-PRO \AiSystem”.

STEP6

Start – Windows Administrative Tools – Services.

Right click and run for “MultiAICameraService”, “MultiAISupportProcessManagementService” and “SQL Server(AISYSTEM)”, respectively.

STEP7

Start – Windows Administrative Tools – Task Scheduler. Right click and enable “AliveMonitoringProcess”

5.6.2. Restore process

STEP1

Install i-PRO Active Guard Server in the restore environment with the same administrator username, and password settings as in the backup environment.

STEP2

Start – Windows Administrative Tools – Task Scheduler. Right click and disable “AliveMonitoringProcess”

STEP3

Start – Windows Administrative Tools – Services.

Right click and stop for “MultiAICameraService”, “MultiAISupportProcessManagementService” and “SQL Server(AISYSTEM)”, respectively.

STEP4

Copy saved files “ai_db.mdf”, “aicam.mdf”, “support_db.mdf”, ai_db_log.ldf”, “aicam_log.ldf”, “support_db_log.ldf”, “bi.mdf” and “bi_log.ldf” to SQL Server data save path and replace existing files.

SQL Server data save path is below:

SQL server 2016

“C:\Program Files\Microsoft SQL Server\MSSQL13.AISYSTEM\MSSQL\DATA”

SQL server 2019

“C:\Program Files\Microsoft SQL Server\MSSQL15.AISYSTEM\MSSQL\DATA”

STEP5

Copy saved folder “Image” to “C:\MultiAI” and replace existing files.

Copy saved folder “Backup” to “C:\MultiAI” and replace existing files.

STEP6

Double-click the saved registry export file. This will re-install the registry keys.

STEP7

Start – Windows Administrative Tools – Services.

Right click and run for “SQL Server(AISYSTEM)”.

STEP8

Execute “C:\MultiAI\tools\restore_user\restore_user.bat” as administrator.

STEP9

Right click and run for “MultiAICameraService”, “MultiAISupportProcessManagementService”, respectively.

STEP10

Start – Windows Administrative Tools – Task Scheduler. Right click and enable “AliveMonitoringProcess”.

5.7. Reset administrator account

When you forget credential of administrator to access configuration, you need to reset on PC that i-PRO Active Guard server is installed.

Execute “C:\MultiAI\tools\ChangeAdminPassword\ChangeAdminPassword.exe” as administrator and set credentials.

5.8. Change SQL Server administrator password

When you want to change password of SQL Server administrator(sa) account, you need to change on PC that i-PRO Active Guard server is installed.

STEP1

Please use “SQL Server Management Studio (SSMS)” to change the passwords of the following account from the “AISYSTEM” instance.

- Security – Logins

•sa

STEP2

Execute “C:\MultiAI\tools\ChangeSQLServerPassword\ChangeSQLServerPassword.exe” as administrator and set password.

5.9. Upgrade SQL server to Standard Edition

You can determine if you need Standard Edition from 3.3.

If you need it, please follow the steps below to upgrade after purchasing the license.

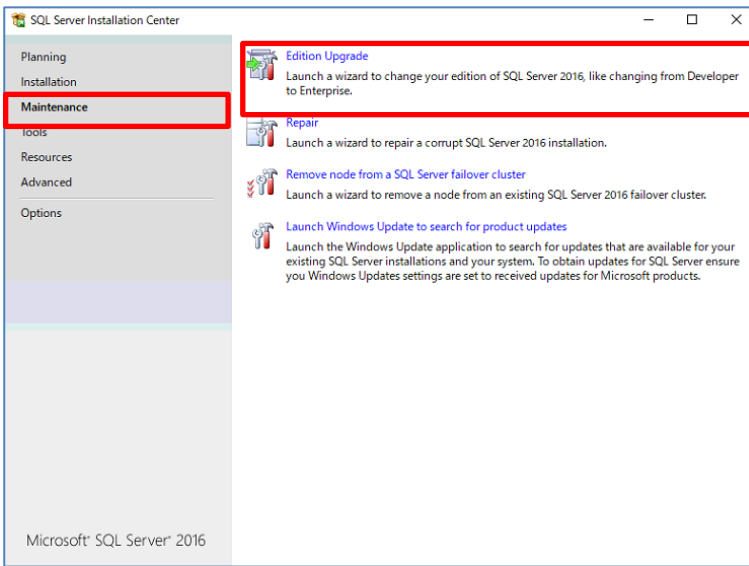
i-PRO Active Guard server software need to be installed in advance.

STEP1

Start “setup.exe” from install media of SQL server Standard Edition.

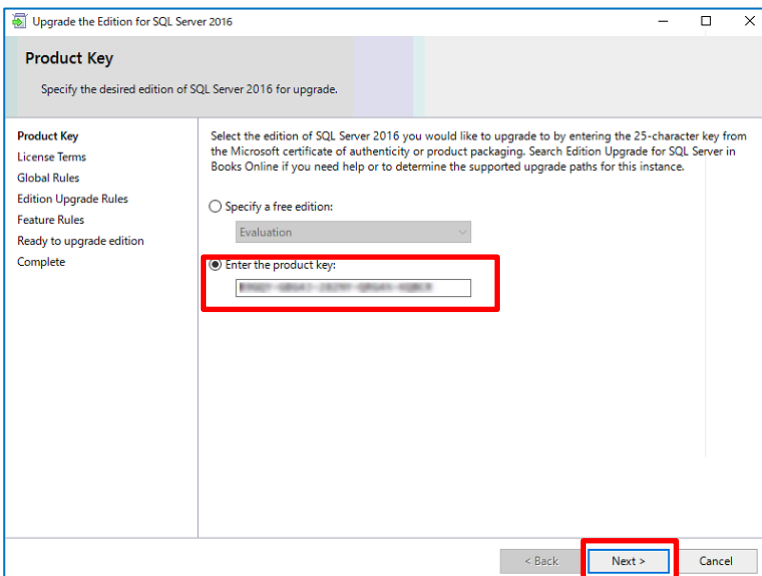
STEP2

Select [Edition Upgrade] from Maintenance.



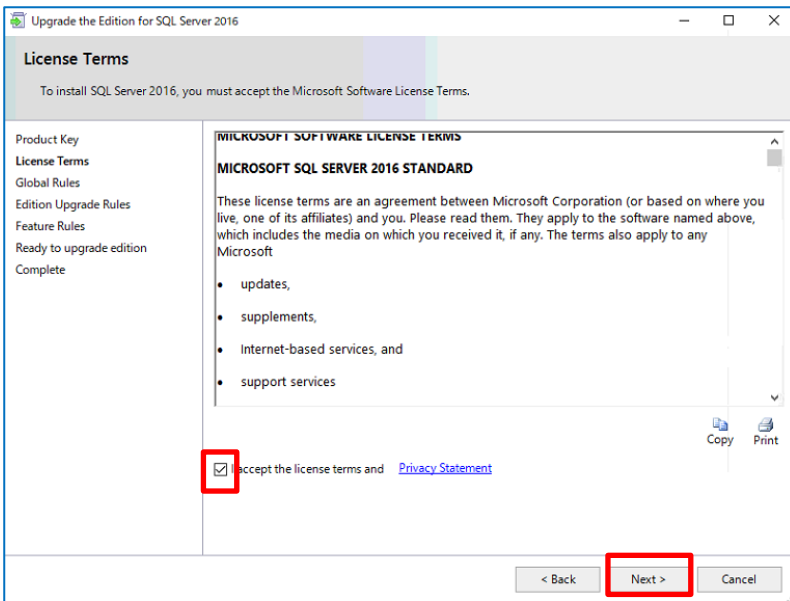
STEP3

Confirm product key is shown and click [Next].



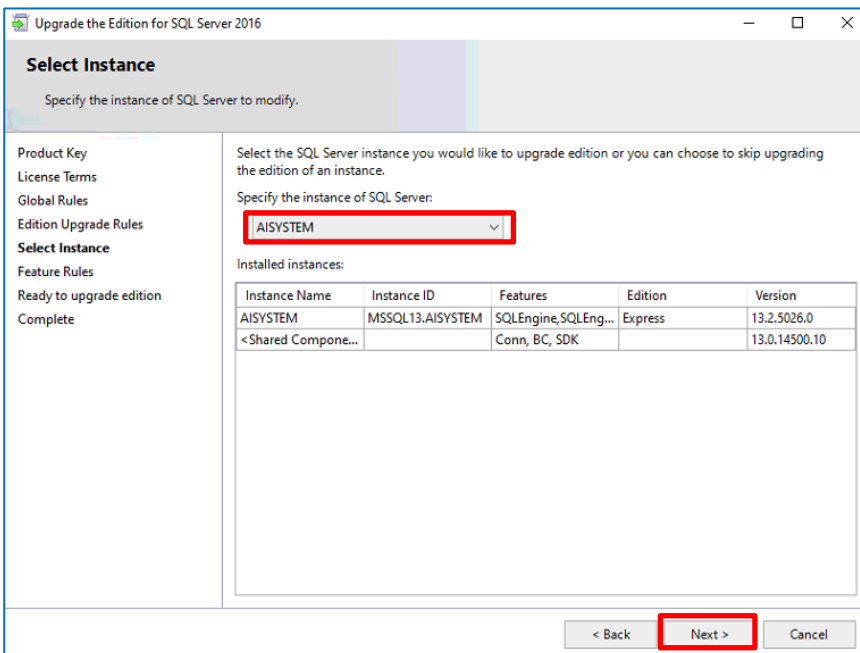
STEP4

Check for license term and click [Next].



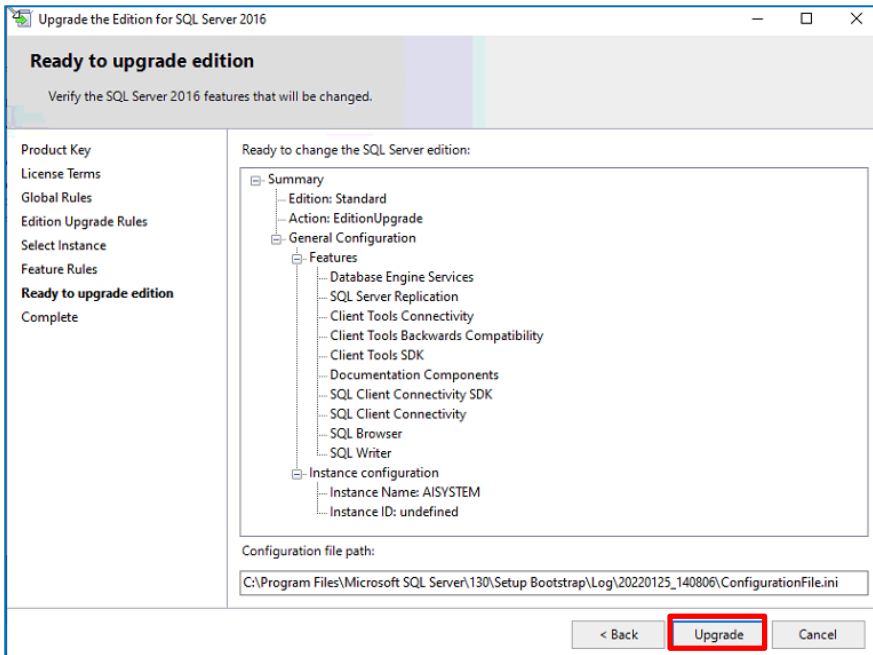
STEP5

Select [AISYSTEM] for instance and click [Next].



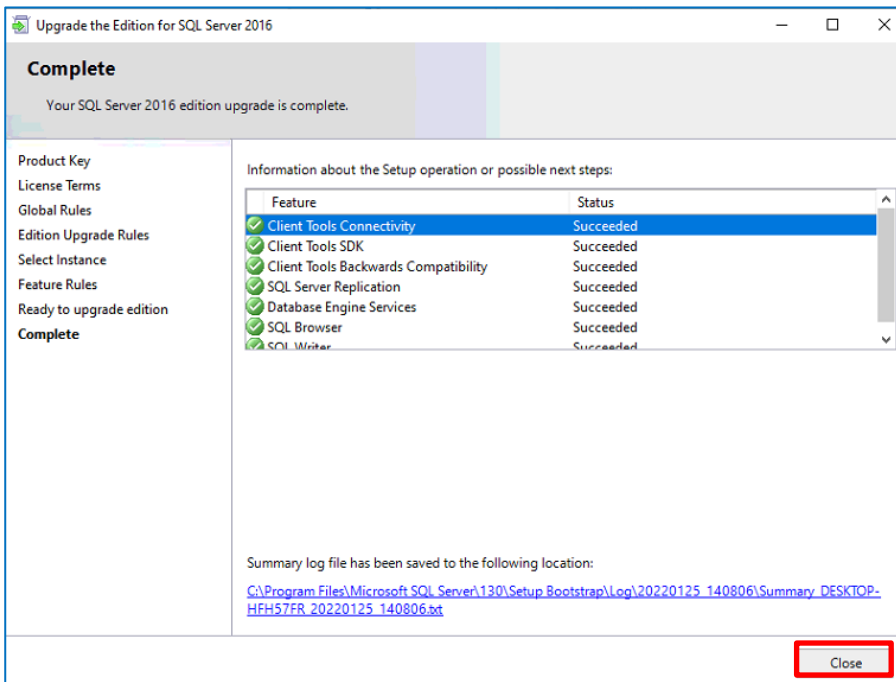
STEP6

Click [Upgrade]



STEP7

Click [Close]



6. Troubleshooting

6.1. Trouble shooting for Installation and Setup

Symptom	Cause and solution	Refer
Failed to install SQL server	There may be some data that was used in the past. Uninstall program related to SQL server 2016 or SQL server 2019, delete folder "C:\Program Files\Microsoft SQL Server\MSSQL13.AISYSTEM" or "C:\Program Files\Microsoft SQL Server\MSSQL15.AISYSTEM" and delete folder C:\MultiAI if you installed before.	5.4.2
	Check if the file path length of file path of install package is less than 119 and launch installer as administrator.	4.1.1
	When you use Window 10, version 20H2 and the Microsoft Edge browser of any version from 84.0.522.52 through 86.0.622.55, update Edge browser. Ref. https://docs.microsoft.com/en-us/troubleshoot/sql/install/error-set-up-update-instances	-
	If the installation fails even after restarting the PC, please execute "\03_SQL\SQLEXPADV_x64_ENU\1033_ENU_LP\x64\Setup\SQLSUPPORT.MSI". And then, execute "MultiAIStartup.exe" again.	-
	If the installation fails with the error "-2068052310", Check if the following programs are present by going to "Control Panel\All Control Panel Items\Programs and Features". <ul style="list-style-type: none"> - Microsoft ODBC Driver 17 for SQL Server - Microsoft OLE DB Driver for SQL Server - SQL Server Native Client If they exist, uninstall them, If present, uninstall and run the installer (MultiAIStartup.exe) again.	

Symptom	Cause and solution	Refer
Cannot access i-PRO Active Guard configuration.	Did you access “http://<ip>:8092” ? “https://<ip>:8092” is correct. When you set another port number when installation or you changed after installation, enter the port number.	4.1.2.1
	Supported browser is Microsoft Edge 85(or later), Chrome 83(or later) and Firefox 95(or later.)	3.2
	Please confirm related service is running on PC that i-PRO Active Guard server is installed. Start – Windows Administrative Tools – Services. “MultiAICameraService”, “MultiAISupportProcessManagementService” and “SQL Server(AISYSTEM)” If stopped, right click and run.	5.6.1
	Please confirm related service is existing on PC that i-PRO Active Guard server is installed. Start – Windows Administrative Tools – Services. - MultiAICameraService - MultiAISupportProcessManagementService If these services do not exist, please perform the following steps. 1. Uninstall i-PRO Active Guard server. 2. Delete SQL instances or database related to i-PRO Active Guard server. 3. Confirm related services does not exist. If related services remain, start command prompt with administrator privileges and delete services with following command. sc delete MultiAICameraService sc delete SupportProcessManagementService 4. Reinstall i-PRO Active Guard server.	5.4.2 4.1.1
Cannot log in to i-PRO Active Guard configuration	If you forget administrator account, reset account from PC that i-PRO Active Guard server is installed.	5.7
Cannot register recorder.	Check if IP address, port, protocol and credentials are correct.	4.1.2.2

Symptom	Cause and solution	Refer
Cannot register cameras	Check if IP address, port, protocol and credentials are correct.	-
	Check if extension software is installed to camera in advance.	-
	Check if cameras are registered to recorder in advance.	-
	Check if "Digest" is used for authentication on camera side. ([Settings] - [User mng.] - [User auth.])	-
	Please try updating the camera and application firmware	-
[Additional application registration] not found	Please execute "EnablePlugin.exe" included in downloaded folder. It may become invisible after updating ASM300.	4.2.2
Face, People or Vehicle License plate, Code or Container images cannot be searched from Plug-in (camera is not shown for camera list).	Camera registration to i-PRO Active Guard server should be done after registering camera to recorder and registering recorder to WV-ASM300. When you re-register the camera to recorder after registration to i-PRO Active Guard server, you need to also re-register the camera to i-PRO Active Guard server (delete and then register again.)	5.2.1 5.1.1
Face, People or Vehicle License plate Code, Container images cannot be searched from Plug-in (the number of search result is 0).	Receiving status from each camera can be confirmed from i-PRO Active Guard configuration. Check network connection between camera and i-PRO Active Guard server, last received time, last diagnosis time. If the result is not expected, check if schedule setting on camera side for extension software is on. note) License plate detection, Code detection and Container detection is not support "last diagnosis time".	4.1.8.1
	Check process status of i-PRO Active Guard server. If some process is stopped, restart the process.	4.1.8.2
	Check if schedule setting on camera side for extension software is on.	-
	Configuration issues in a multiple network environment Check if the camera is connected to a network that is not local to the server.	-

Symptom	Cause and solution	Refer
	<p>Firewall configuration issues.</p> <p>Check if i-PRO Active Guard server's program are listed on "Allowed apps and features" for firewall settings.</p>	-
Camera name, app name, etc. Cannot displayed correctly in Plug-in	<p>Check if camera or app settings have been changed.</p> <p>If there are any changes, please update i-PRO Active Guard server</p>	5.3
Cannot connect from Plug-in to i-PRO Active Guard server.	<p>Check if IP address, port, protocol and credentials are correct. Port and credentials can be changed from i-PRO Active Guard configuration.</p>	4.1.5.2 4.2.3
	<p>Please confirm related service is existing on PC that i-PRO Active Guard server is installed.</p> <p>Start – Windows Administrative Tools – Services.</p> <ul style="list-style-type: none"> - MultiAICameraService - MultiAISupportProcessManagementService <p>If these services do not exist, please perform the following steps.</p> <ol style="list-style-type: none"> 1. Uninstall i-PRO Active Guard server. 2. Delete SQL instances or database related to i-PRO Active Guard server. 3. Confirm related services does not exist. <p>If related services remain, start command prompt with administrator privileges and delete services with following command.</p> <pre>sc delete MultiAICameraService sc delete SupportProcessManagementService</pre> <ol style="list-style-type: none"> 4. Reinstall i-PRO Active Guard server. 	5.4.2 4.1.1
Playback time is incorrect.	<p>Check if PC time of i-PRO Active Guard server and recorder are synchronized.</p>	-
Notifications such as registered face detection or registered	<p>Check if i-PRO Active Guard server detect alarm from diagnosis on i-PRO Active Guard configuration.</p> <p>If alarm exists, check the process status of i-PRO Active Guard server.</p>	4.1.8.3

Symptom	Cause and solution	Refer
people detection cannot be shown	Check the configuration of alarm receive port on Preference setting. Notification port number can be confirmed from Alarm notification configuration.	4.1.6
[Additional application registration] menu is not display at [Setting] menu of ASM300	<p>Check if "EnablePlugin.exe" was executed correctly.</p> <p>If you have changed the ASM300 installation path from the default, please do the following:</p> <ol style="list-style-type: none"> 1. Open a command prompt. 2. Change directory to the folder where "EnablePlugin.exe" exists. 3. Type "EnablePlugin.exe [ASM300 installation path]" and press enter. 	4.2.2

6.2. Trouble shooting after starting operation

When trouble occurs after starting operation, you can confirm error code on i-PRO Active Guard configuration (Refer to 4.1.8.4)

Symptom	Error code	Cause and solution
Server process is stopped on i-PRO Active Guard configuration	514 - 517 1025 – 1028 4097 – 4100 4354,4357, 4610,4611	Services related to i-PRO Active Guard server does not exist. Please install i-PRO Active Guard server again Process related to i-PRO Active Guard server failed to start. Restart i-PRO Active Guard server manually (Refer to 4.1.8.2). When process stops again, download logs (Refer to 4.1.8.5) and contact the system administrator.
Camera disconnect	4355,4356,4358	Check network connection between camera and i-PRO Active Guard server. Check if video recording to recorder and live monitoring works well or not. If recording or live monitoring also has problem, check camera's status. If problem continues after restarting camera and i-PRO Active Guard server manually (Refer to 4.1.8.2), download logs (Refer to 4.1.8.5) and contact the system administrator.
Face, People Vehicle License plate, Code or Container Images cannot be searched from Plug-in (the number of search result is 0).	66052,66053	Receiving status from each camera can be confirmed from i-PRO Active Guard server configuration. Check network connection between camera and i-PRO Active Guard server, last received time and last diagnosis time. If the result is not expected, check if schedule setting on camera side for extension software is on.
False detection (Not face, people or vehicle etc. is searched)	-	To avoid false detection, refer to manual of extension software.

Symptom	Error code	Cause and solution
High CPU usage, memory usage or disk access	65793,65794 65796,65797	<p>Check CPU or memory status (Refer to 4.1.8.2) and confirm whether the usage by i-PRO Active Guard server software is high.</p> <p>If the usage of i-PRO Active Guard server is high, to reduce load, configure mask area on camera side or “Max frequency of receiving object data (per sec)” (Refer to 4.1.5.4)</p> <p>If the usage of i-PRO Active Guard server is low and those of whole PC is high, check the influence of other software.</p>
Reach the max disk space of image (delete old images)	65795	<p>Old images have been deleted by exceeding the settings for “Max usage of image storage drive”.</p> <p>If you need to store data for “Retention period”, configure mask area on camera side to reduce the number of detections.</p>
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.

7. Appendices

7.1. Open-source software

This product uses open-source software.

For details concerning licensing, read license.txt included in install package.

7.2. Specifications

The details of the specifications are as follows.

Scale	Supported camera	i-PRO network camera with AI engine
	Number of cameras	1 to 4CH when installed with WV-ASM300W (AI Face Detection is up to 4) 1 to 300CH when installed in dedicated server. (AI Face Detection is up to 100)
	Number of clients	No limitation
	Number of Network disk recorders	12 Network disk recorders
	Number of i-PRO Active Guard server per a client	100
Supported AI applications	For plugin	AI-VMD / AI Sound Classification / AI Face Detection / AI People Detection / AI Vehicle Detection / AI-VMD/ AI People Counting for 360-degree fisheye camera / AI Scene change detection / AI License Plate Detection / VaxOCR GENESIS / VaxOCR CONTAINER
	For dashboard	AI Face Detection, AI People Detection, AI Vehicle Detection, AI-VMD/AI People Counting for 360-degree fisheye camera, AI-VMD, On-site Learning, AI Occupancy detection, AI License Plate Detection.
Store	Retention period	Max. 31 days limitation for face, people, vehicle, license plate, code or container data (92 days for count/heatmap/statistics). * Max. 397 days (732 days for count/heatmap/statistics) days by upgrading SQL Server Standard edition or higher
Post Search	Filter	People, Vehicle, LPR (attribute, date & time, camera, moving direction), OCR, Container (attribute, date & time, camera), Face (similar face, date & time and camera)
	Similar search	Yes (by same attribute information)

		*People and Vehicle (by same attribute information) and Face
	Sort	Descending date, Ascending date, Similarity (Face), Only high Relevance (People and Vehicle)
Alarm	Watch list alarm	Up to 30,000 faces, up to 12 people attributes, up to 12 vehicle attributes. Up to 12 LPR attributes or license plates group. Up to 12 OCR group. Up to 12 Container attributes or Container group. There is no limitation to the number of license plate, OCR code, container code and license plate group, OCR group, container group (*depending on the system design).
	Detection alarm	AI Sound Classification (Gunshot / Yell / Vehicle horn / Glass break) AI-VMD (Intruder / Loitering / Direction / Line cross) / AI Occupancy detection, AI Scene change detection, all License plate, all OCR code, all Container code,
	Related function	Alarm destination (plugin, camera, IO Unit or Custom HTTP) and alarm trigger can be configured.
Playback/ Export	Playback	Playback video around the time of the best shot on full screen
	Export video	Save best shot image, Export video from Network disk recorder
	Export Search result	HTML and CSV
Dashboard	Supported browser	Microsoft Edge, Google Chrome and Firefox
	Chart	People counting, occupancy statistics and heatmap when using AI-VMD/AI People Counting for 360-degree fisheye camera. People counting and vehicle counting when using AI-VMD. People counting and occupancy statistics when using AI Occupancy Detection. On-site learning object counting when using AI-VMD with On-site Learning application. Data update interval is minimum 5 seconds for people/vehicle/On-site learning object counting and 1 min for heat map/ LPR Counting. Age and gender statistics when using AI Face Detection. Data update interval is minimum 1 min. People attribute statistics when using AI People Detection. Data update interval is minimum 1 min.

		<p>Vehicle attribute statistics when using AI Vehicle Detection. Data update interval is minimum 1 min.</p>
	<p>Customize</p>	<p>Contents, display size, location for each chart. 3 Layouts per user can be saved and 24 users can be registered. (Up to 4 users can be log-in at the same time) Basic display color theme (dark or light) Line chart type (Straight line / Smoothed line), line/area name for counting</p>

7.3. Cautions when disposing of or transferring PCs

When disposing of or transferring a PC used with the i-PRO Active Guard system, be sure to follow the uninstallation procedure, see 5.4.