Setup Instructions

i-PRO Active Guard for WV-ASM300

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1. Preface

1.1. Limitation of liability

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THIS PUBLICATION COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE ADDED TO THE INFORMATION HEREIN, AT ANY TIME, FOR THE IMPROVEMENTS OF THIS PUBLICATION AND/OR THE CORRESPONDING PRODUCT (S).

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- NVIDIA, NVIDIA logo and Quadro are registered trademarks and/or trademarks of NVIDIA Corporation in the United States and other countries.

- 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 USER NAME 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 user name 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 user name 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.

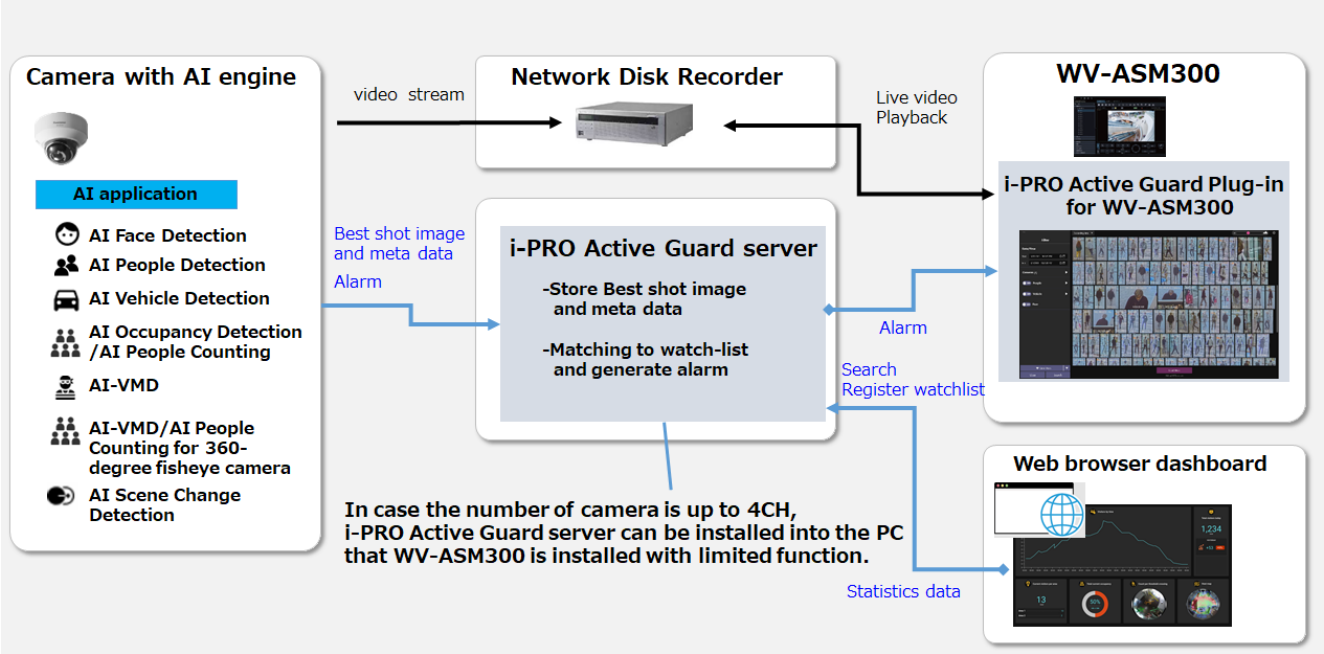
- Databases can be corrupted by forced shutdowns / power outages or system outages / system crashes due to power interruptions.

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 be worked.

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 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.
- 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.
- 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.
- AI Occupancy Detection/AI People Counting: Camera's extension software. V1.60 or later is supported.
- AI-VMD: 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 area/line names set in the camera.

- 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 Processing Relay: Camera's extension software. V1.00 or later is supported.

Please see https://i-pro.com/global/en/surveillance/products/i-pro-ai-application/ for more information.

Cameras 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,	1.00 or later

camera model	Version
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	
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.

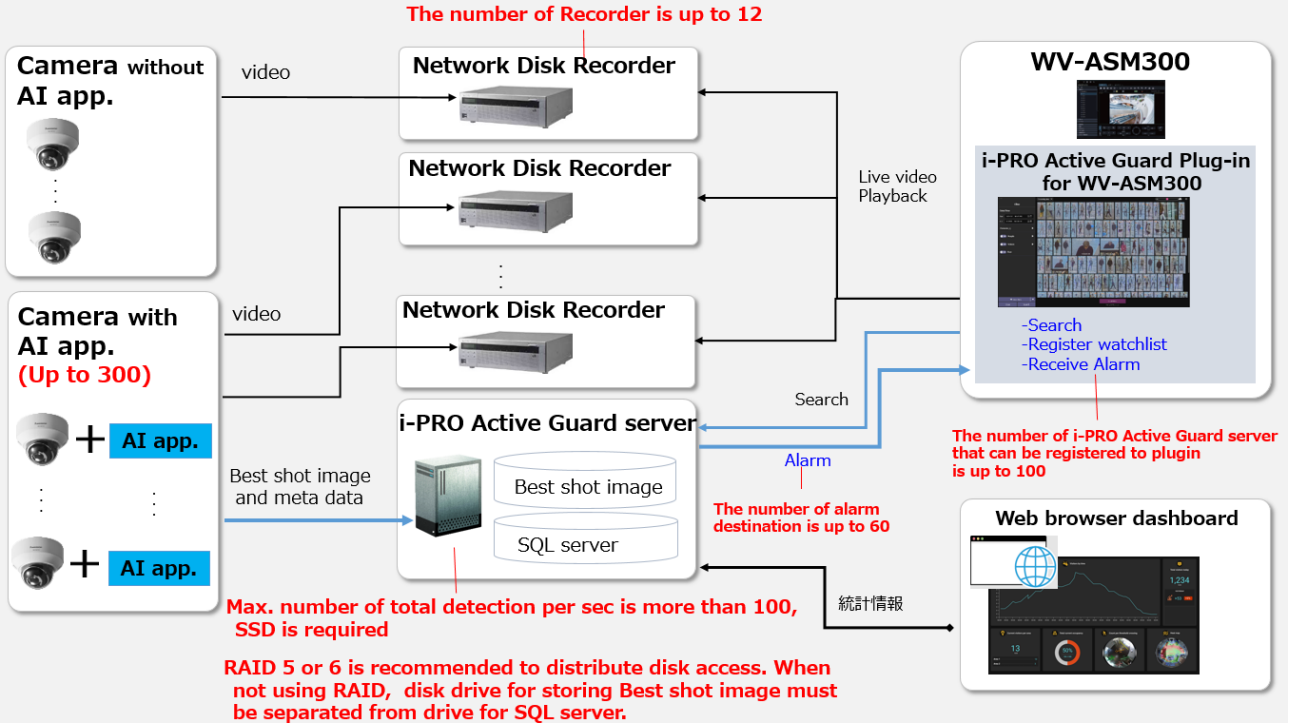
WV-ASM300 / Network disk recorder/Others

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.
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



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 60.

(2) Up to 12 Network Disk Recorder server can be registered to i-PRO Active Guard server.

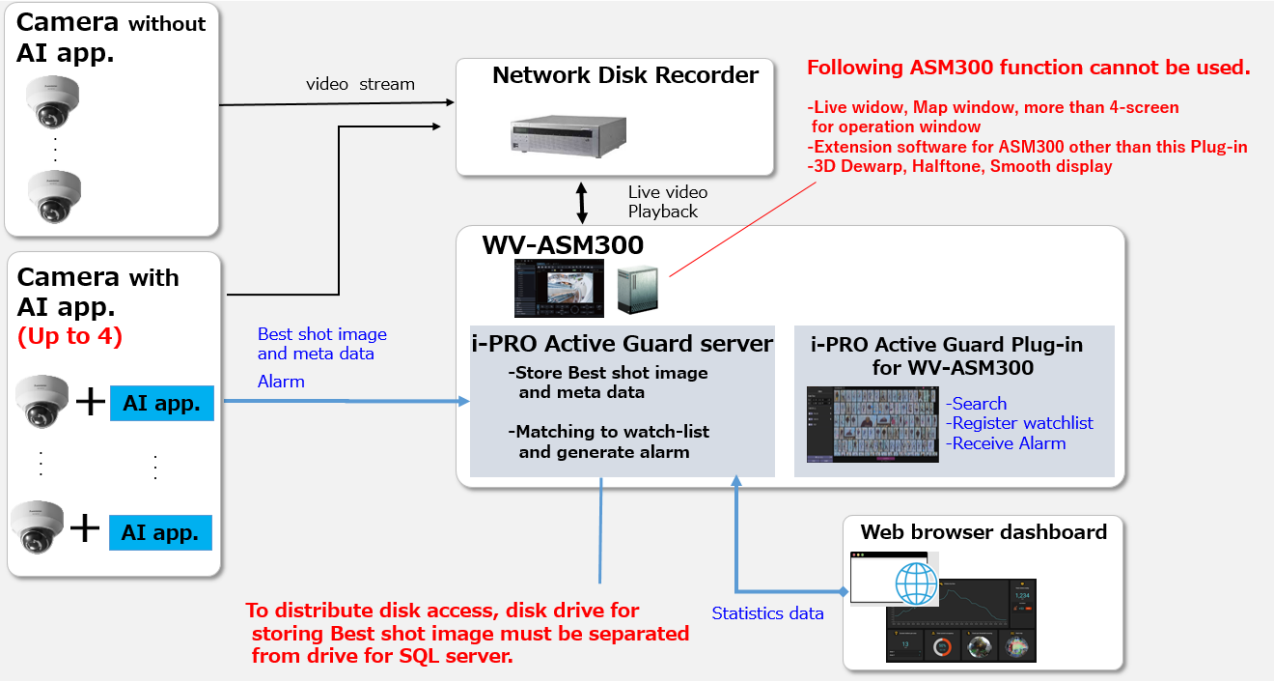
(3) RAID 5 or 6 is recommended to distribute disk access. When not using RAID, disk drive for storing Best shot image must be separate from drive for SQL server.

(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.

i-PRO Active Guard server

(1) The number of cameras with AI engine is up to 4

(2) To distribute disk access, disk drive for storing best shot image must be separated from drive for SQL server.

(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 60.	• 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 * version 2004 or later Microsoft® Windows 11 Pro Microsoft® Windows 11 Enterprise Microsoft® Windows 11 Education Microsoft® Windows 11 Pro Education 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 60.	• 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 Microsoft® Windows Server 2019 Datacenter Microsoft® Windows Server 2022 Datacenter • GbE network interface card

		Requirement
i-PRO Active Guard server installed with ASM300	Up to 4 cameras	• 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(64 bit) • GbE network interface card • Graphic: NVIDIA Quadro P1000, NVIDIA T1000

Common software requirement

Category	Supported software
Database Engines	• SQL server 2016 Express/Standard Edition SQL server 2016 Express Edition is installed when installing i-PRO Active Guard server. Upgrade procedure is shown in 5.8.
Web browser for Configuration Tool	•Microsoft Edge 85 or later •Chrome 83 or later •Firefox 95 or later

Disk drive considerations

When the maximum number of detection exceeds 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.

RAID 5 or 6 is recommended to distribute disk access. When not using RAID, disk drive for storing Best shot image must be separate from drive for SQL server.

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 and vehicle 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 up to version 22H1,
- GbE network interface card
- Graphic: NVIDIA Quadro P1000,NVIDIA T1000

3.3. How to determine the system architecture

STEP1: The number of camera

When the numbers of cameras with AI People detection, AI Vehicle detection, AI Occupancy detection/AI People Counting, AI-VMD, Sound, AI-VMD/AI People Counting for 360-degree fisheye camera or AI Scene Change detection 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 camera.

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 Best shot, the number of extension software (Face, People, Vehicle and People Counting for for 360-degree fisheye camera) should be considered. Since the amount of counting data by AI-VMD, AI Occupancy detection/AI People Counting, 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	People counting for 360-degree fisheye camera
The number of extension software					
# of people/vehicle	Max.	1,000	1,000	1,000	
[per camera, per hour]	Average.	1,000	1,000	1,000	

[Bitrate]

Maximum bitrate of Best shot image [Mbps]	0.00
Maximum bitrate of People counting data [Mbps]	0.00
Total bitrate that server PC receives [Mbps]	0.00

[Disk access]

Maximum number of detection in total [per sec]	0

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

STEP3: Retention period and storage

	Face	People	Vehicle	People counting for 360-degree fisheye camera
Retention period (day) *Face, People, Vehicle(1-31), People counting(1-92) * Up to 366 days when using SQL Server Standard Edition	31	31	31	92
Operating time (hours per day)	8	8	8	8

Estimated used disk size for Best shot images[GB]	0.00
Estimated used disk size for People counting[GB]	0.00
Estimated used disk size for database[GB]	0.00

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

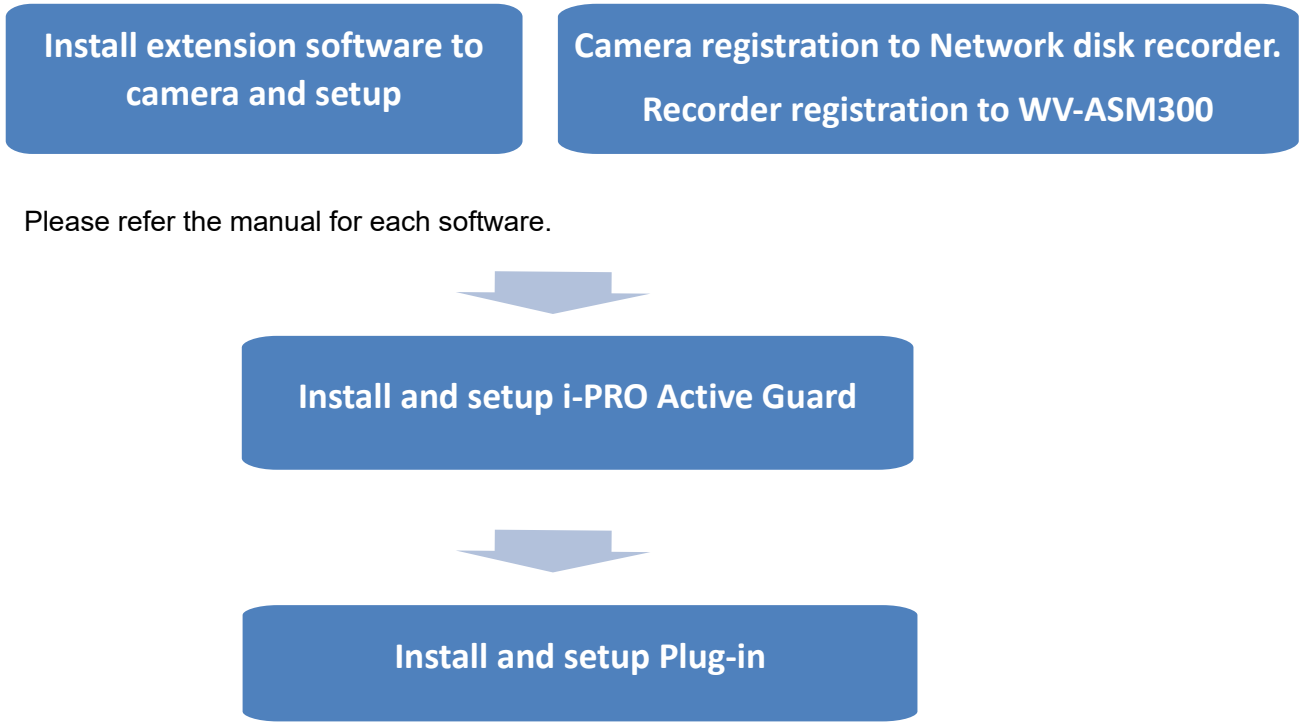
3.4. Ports used in i-PRO Active Guard server

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
1435	TCP	Connection to SQL server
8090	HTTP	Client Plug-in connection
8091	HTTPS	Client Plug-in connection
8092	HTTPS	Web configuration tool connection
55000	TCP	Internal process communication
55002	TCP	Internal process communication

4. Installation and setup

Procedure overview



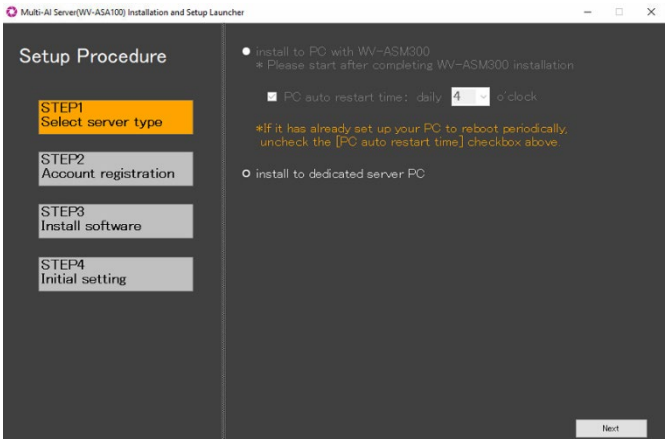
4.1. Install and setup i-PRO Active Guard server

Download the installer from https://i-pro.com/global/en/surveillance/training-support/documentation-database-list/
Install the i-PRO Active Guard server software. Configuration after installation can be done from web browser.

4.1.1. Install

Execute "MultiAIStartup.exe" as administrator (file path length must be less than 120).

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].



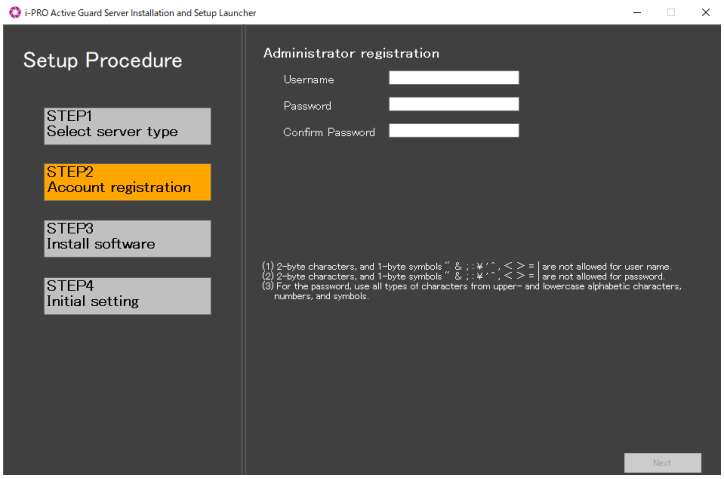
Select [install to PC with WV-ASM300] or [install to dedicated server PC].

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.

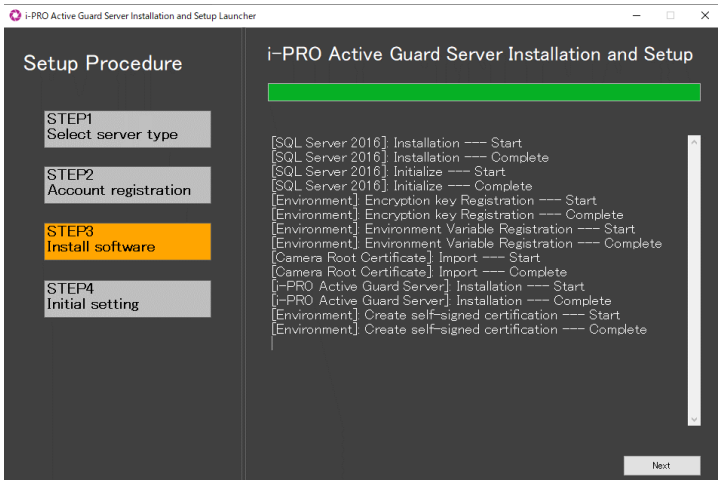
When you select [install to PC with WV-ASM300] and if you have already set the automatic restart for your PC, uncheck [PC automatic restart time]. Also, make sure to restart from 4:00 to 23:00 so that the restart time will be after the nighttime processing by this software is completed. See 4.1.5.4 for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



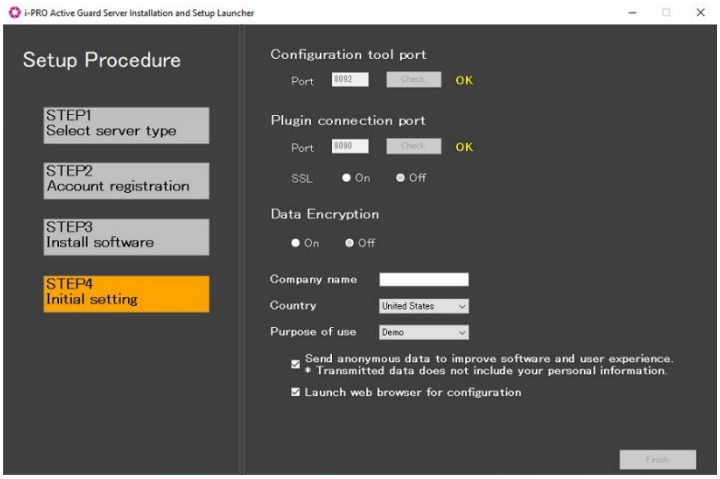
Register credentials and click [Next].

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].



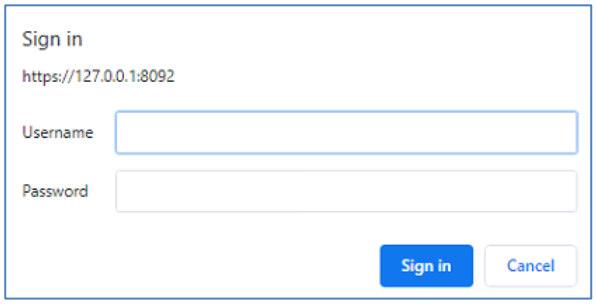
Configure port number, SSL and Data encryption, Company name, Country and Purpose of use and click [Finish].

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

4.1.2. Setup i-PRO Active Guard server

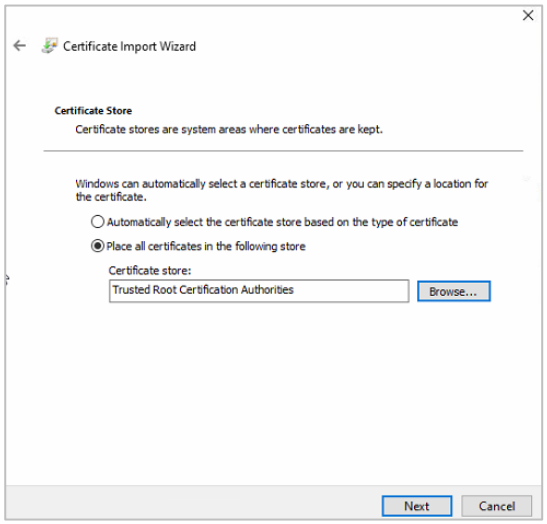
4.1.2.1. Login

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

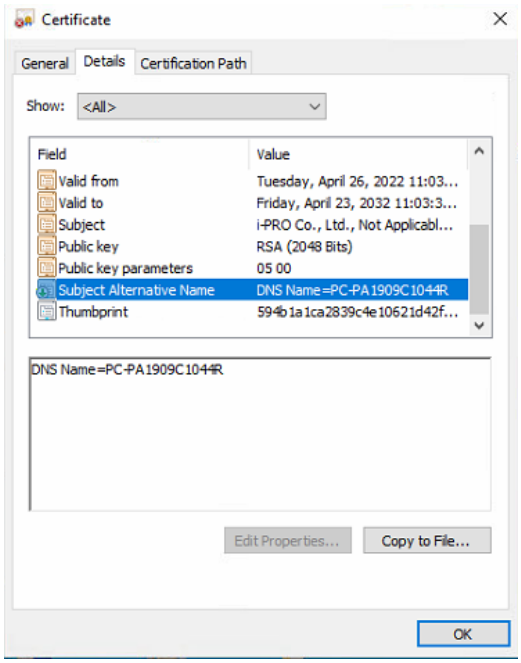


Note)
Credentials and port number configured by install tool 4.3.1 are used.
i-PRO Active Guard server uses self-signed certificate for web access.
When the security alert window is displayed, click [advanced] and [Proceed to <ip> (unsafe)].

It is possible to prevent the warning display by performing the following procedure for each client PC to be accessed.
1) Copy “C:¥MultiAI¥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.

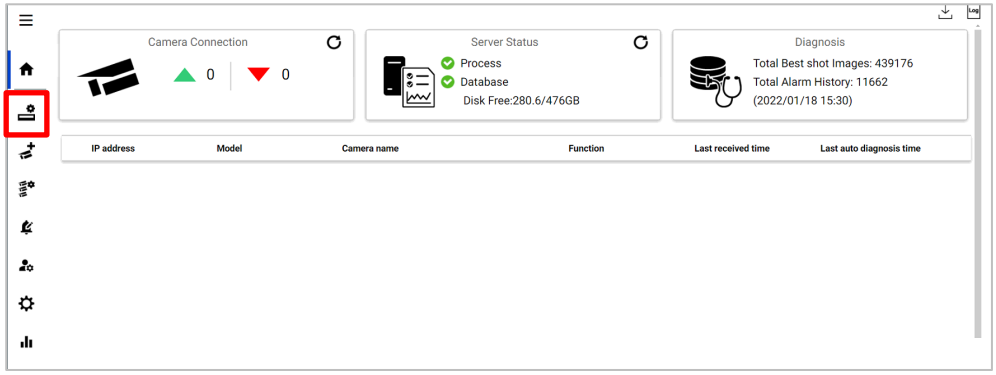


6) Open “C:¥Windows¥System32¥drivers¥etc¥hosts” and add IP address of i-PRO Active Guard server and xxxx(DNS Name).
ex. 192.168.0.125 PC-PA1909C1044R

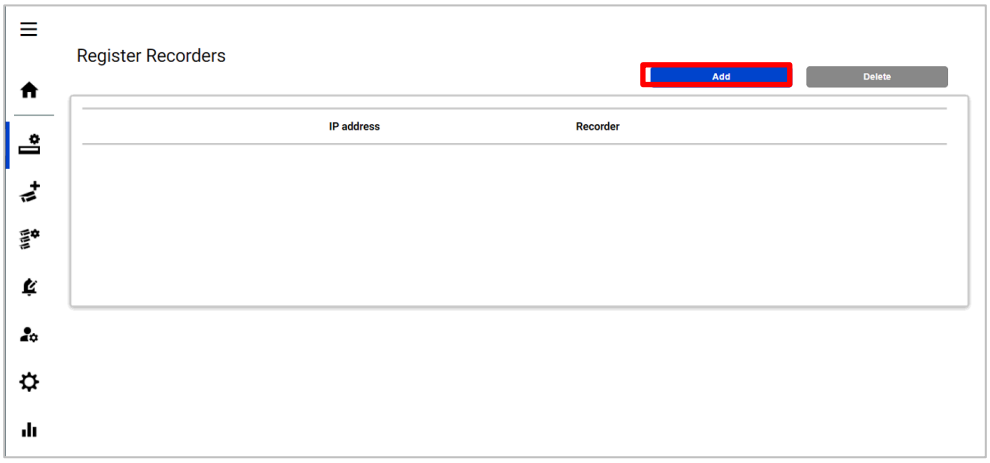
7) Access https://xxxx:8092 using web browser.

4.1.2.2. Register Recorders

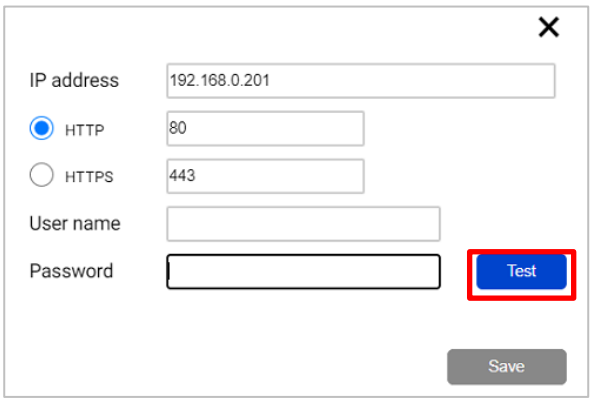
Click (Register Recorders)



Click [Add]



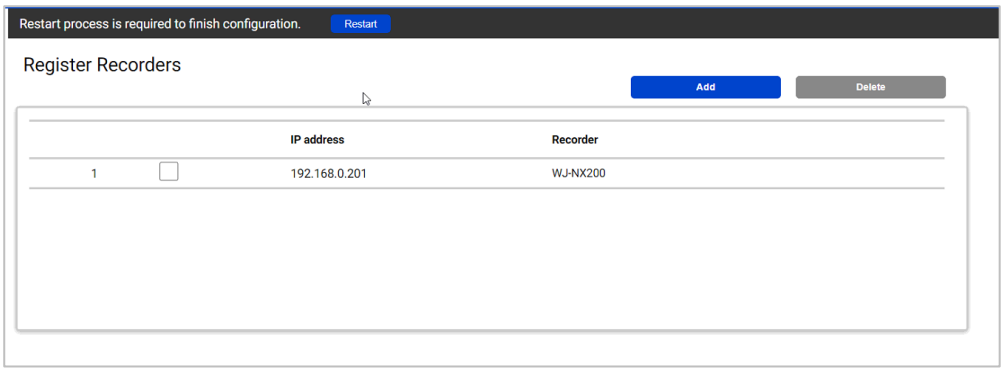
Input Recorder's information and click [Test]



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

Note) Regardless of the HTTP/HTTPS selection, be sure to set the HTTPS port configured on the recorder.

Confirm the recorder is registered.

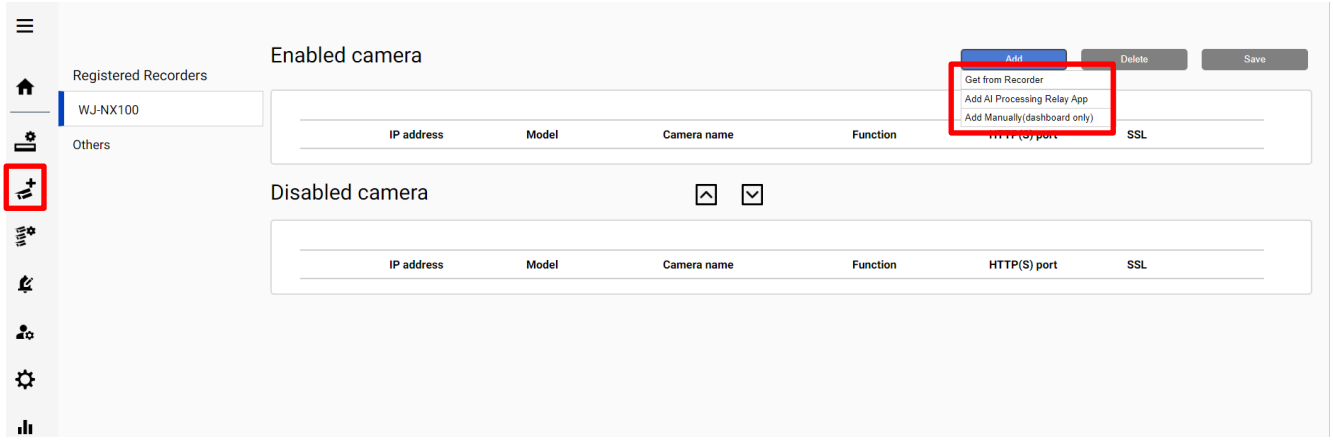


Note) Restart button will be appeared on the top of screen, but you do not need click now.
You need to click Restart after completing all other configuration.
Up to 12 recorders can be registered.

4.1.2.3. Register Cameras

Click (Register Cameras)

Select [Add] - [Get from Recorder]



Note)

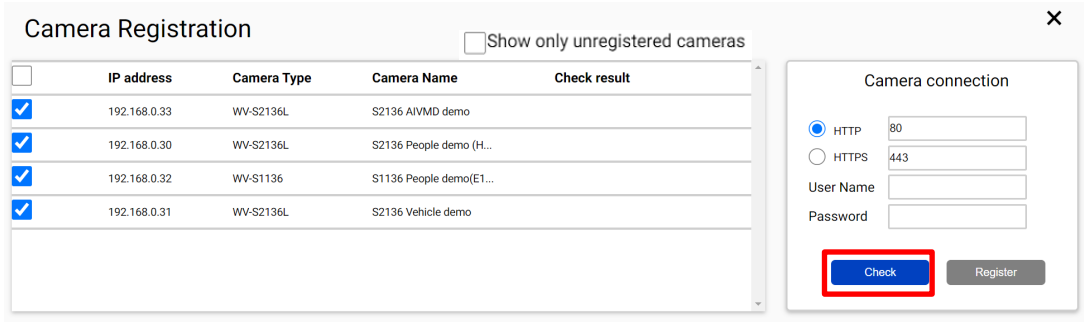
- When camera is selected from [Add AI Processing Relay App], Only cameras to which have added AI Processing Relay App can be registered. Set up the cameras you want to relay in the Camera setting browser and register it to Recorder in advance. Enter IP address of the camera, credentials, [Check] and [Register].

Supported cameras are i-PRO/Panasonic cameras.

- When camera is registered from [Add Manually(dashboard only)], only dashboard function can be used. i-PRO Active Guard Plug-in cannot use the camera. Enter IP address of the camera, credentials, [Check] and [Register].

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

Input camera's credentials and click [Check].



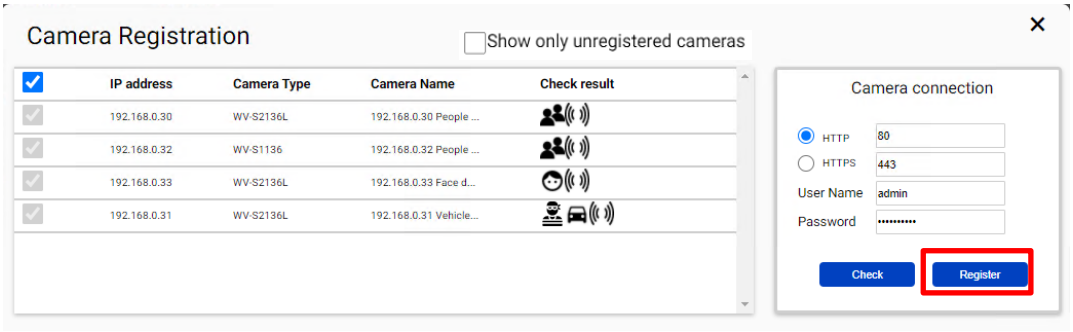
Note)

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

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

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

Click [Register].



(AI People detection)

(AI Vehicle detection)

(AI Face detection)

(AI-VMD)

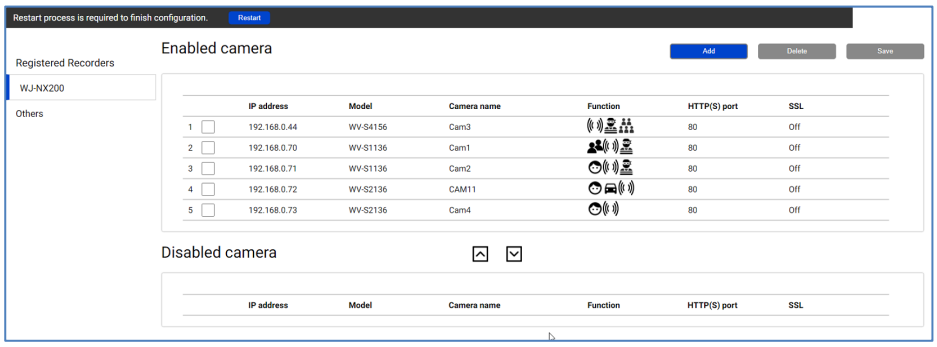
(AI Sound classification)

(AI People Counting)

(AI Vehicle Counting)

(AI Scene Change detection)

Confirm cameras are registered



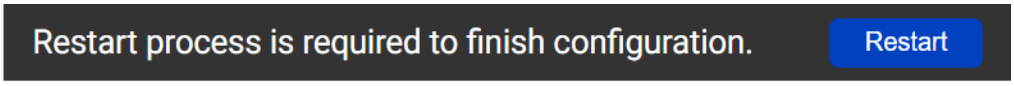
Note)

If multiple recorders are registered, it is necessary to register cameras by selecting recorder from [Registered Recorders] and [Get from Recorder]. You can check the registration status of the camera registered by [Add Manually(dashboard only)] in [Others].

4.1.3. Restart process to apply changes

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

When you finish all configuration. Click “Restart” from display bar above or Home screen.

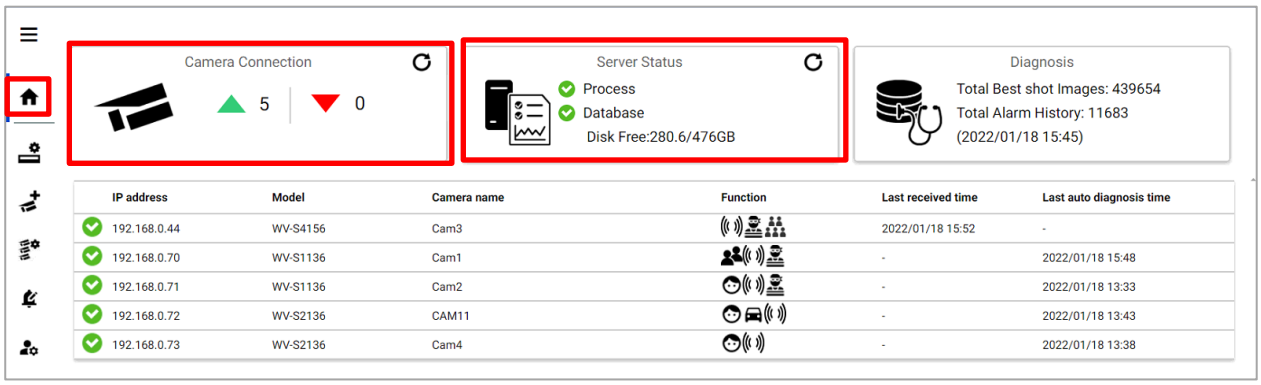


4.1.4. Check

Click (Home)

● Check camera connection

Check all registered cameras are connected.



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

means the number of camera 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.

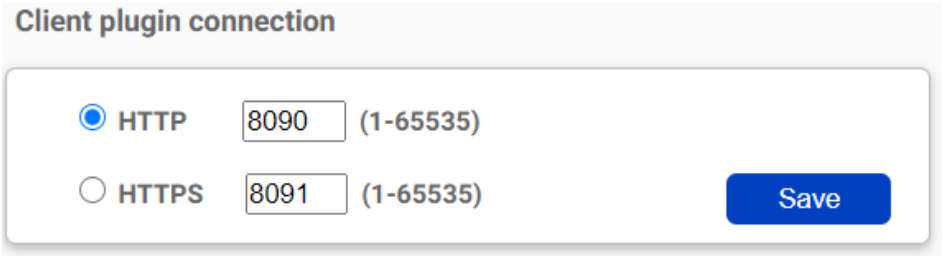
4.1.5.1. General

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

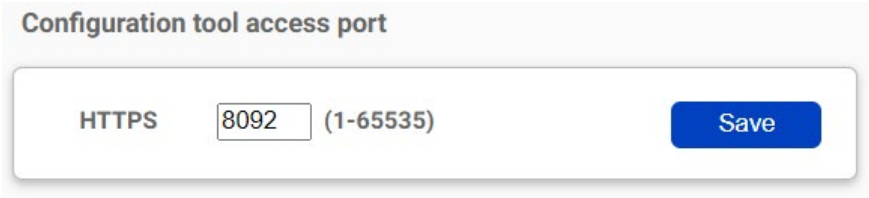
Select [HTTP] or [HTTPS] and port number (Default: Set by install tool at 4.3.1)



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 4.3.1)



Note) When you change and restart software at 4.3.2, you need to access https://<ip>:<port> using new port number. Make a note not to forget.

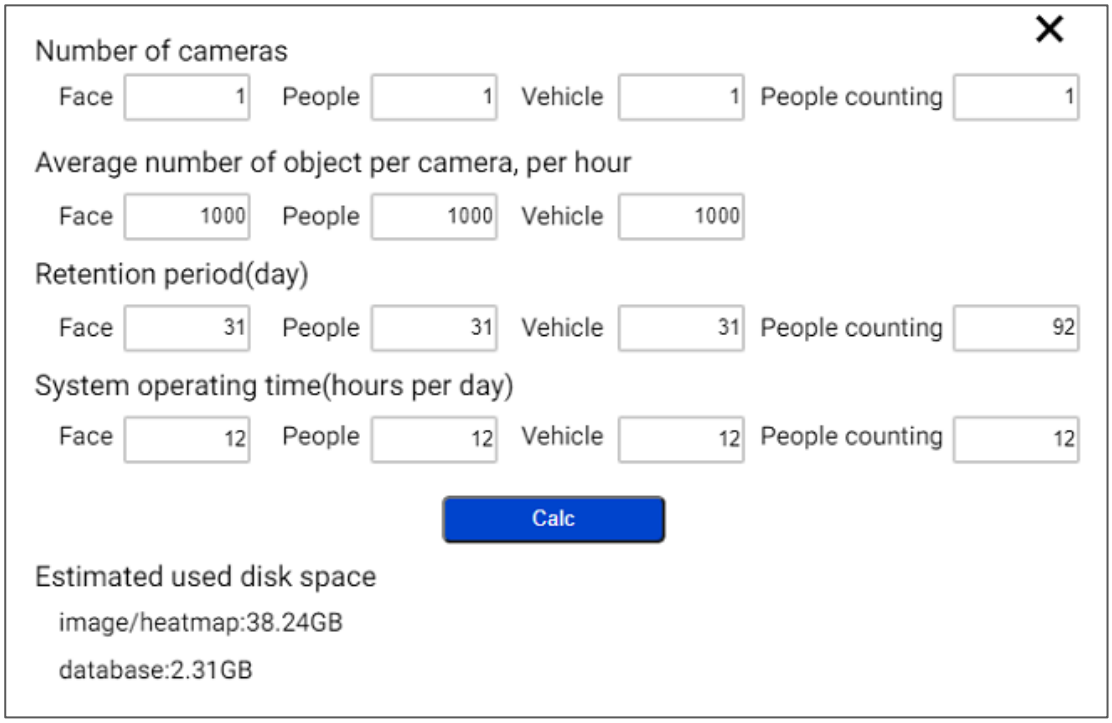
4.1.5.4. Database

Configuration item	Comment
Storing images in database	All data(default): Store all data including images Only alarm and statistics data: Store only alarm and statistics data Only statistics data: Store only statistics data
Retention period	[For face image/statistics, people image/statistics, vehicle image/statistics and alarm history] Using SQL Server Express Edition:1 – 31 days (Default: 31) can be set Using SQL Server Standard Edition:1 – 366 days (Default: 366) can be set [For people/vehicle count including heat map statistics] Using SQL Server Express Edition:1 – 92 days (Default: 92) can be set Using SQL Server Standard Edition:1 – 366 days (Default: 366) can be set Note) 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.
CSV backup	Enable/Disable can be configured. (Default: Disable) 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. Data in CSV file cannot be shown on dashboard. Note) When enable, [Max usage of image storage drive] will be also enabled automatically.
Max usage of image storage drive(*)	Enable/Disable and data size 10- 2000 (GB) can be configured. (Default: Disable) Note) When enable, and 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.
Image data save path	Save path for images (Default: C:¥MultiAI¥Image) Note) When you change save path, all existing image data cannot be used from i-PRO Active Guard Plug-in.
SQL Server data save path	SQL Server data save path is shown. You cannot change this.
Max frequency of receiving object data (per sec)	50 -300 (Default: 100) Note:

	If the number of object data from all cameras exceed 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.
Data encryption	On/Off is shown set by install tool at 4.3.1. 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.



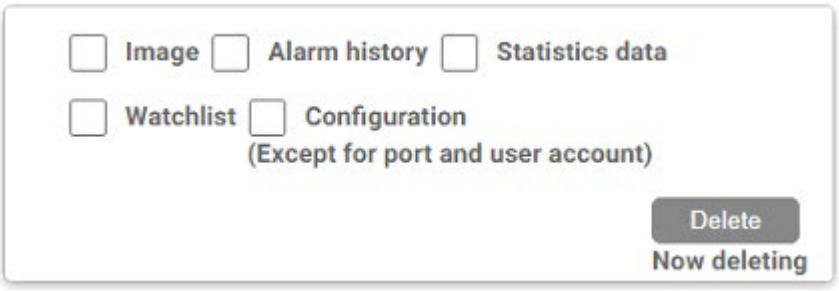
Note)

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 face watchlist, people watchlist and vehicle watchlist. 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.

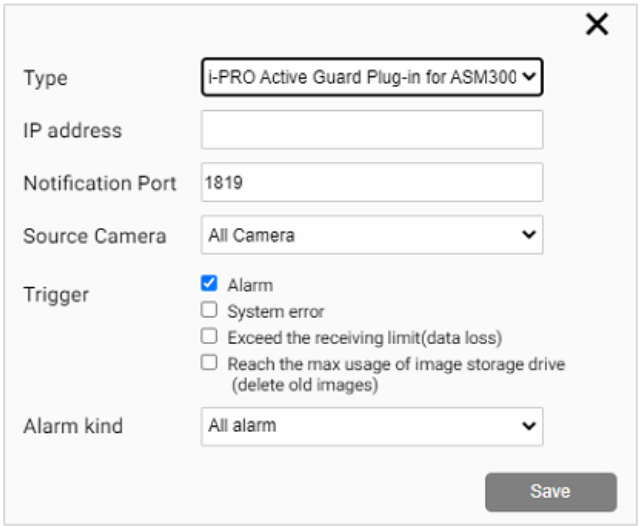


4.1.6. Alarm Notification configuration (optional)

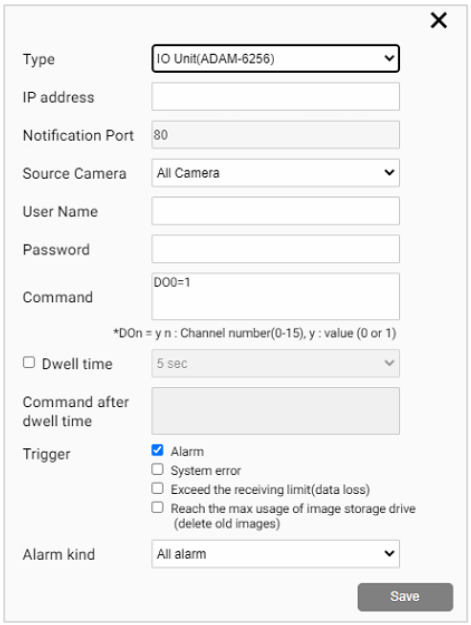
Alarm notification configuration can be configured for various alarm.
When setup for i-PRO Active Guard Plug-in (4.6.2), this configuration will be done automatically. To change the notification conditions, set manually from this screen.

Click (Alarm notification) and [Add]

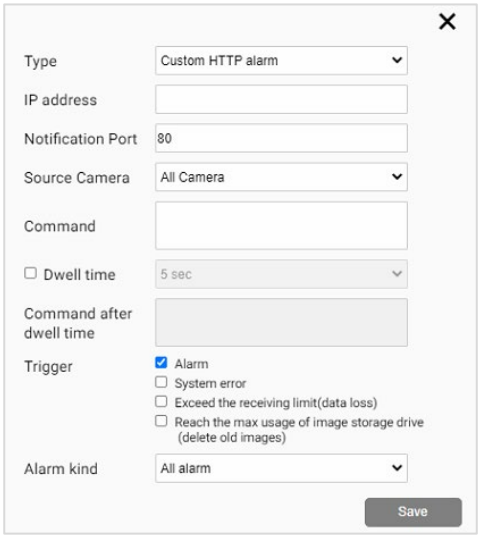
- When [i-PRO Active Guard Plug-in for ASM300],[Camera] or [Mobile notification tool] is selected for [Type], set the input items displayed and click [Save].



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



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



[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.

[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, 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 4.3.5.4.

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 4.3.5.4.

[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], [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].

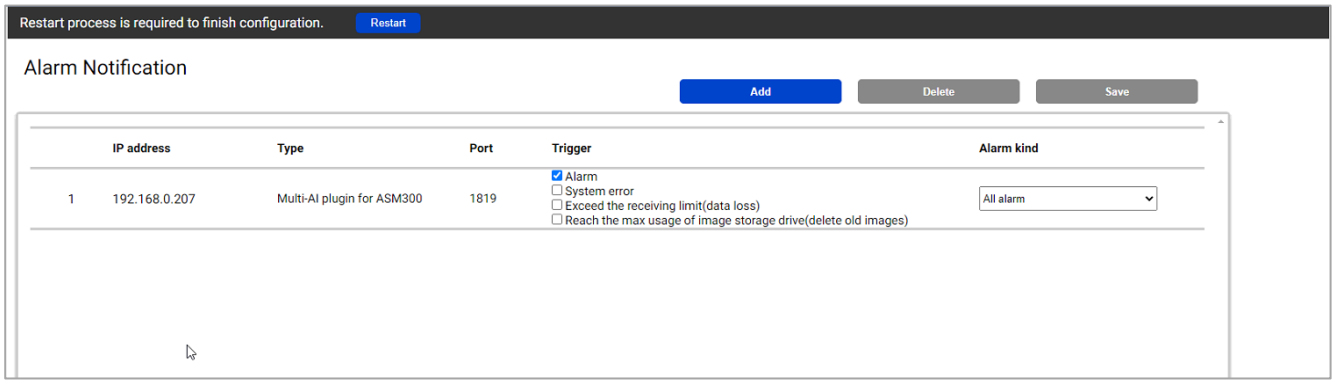
Note)

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 (4.6.2), 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.



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

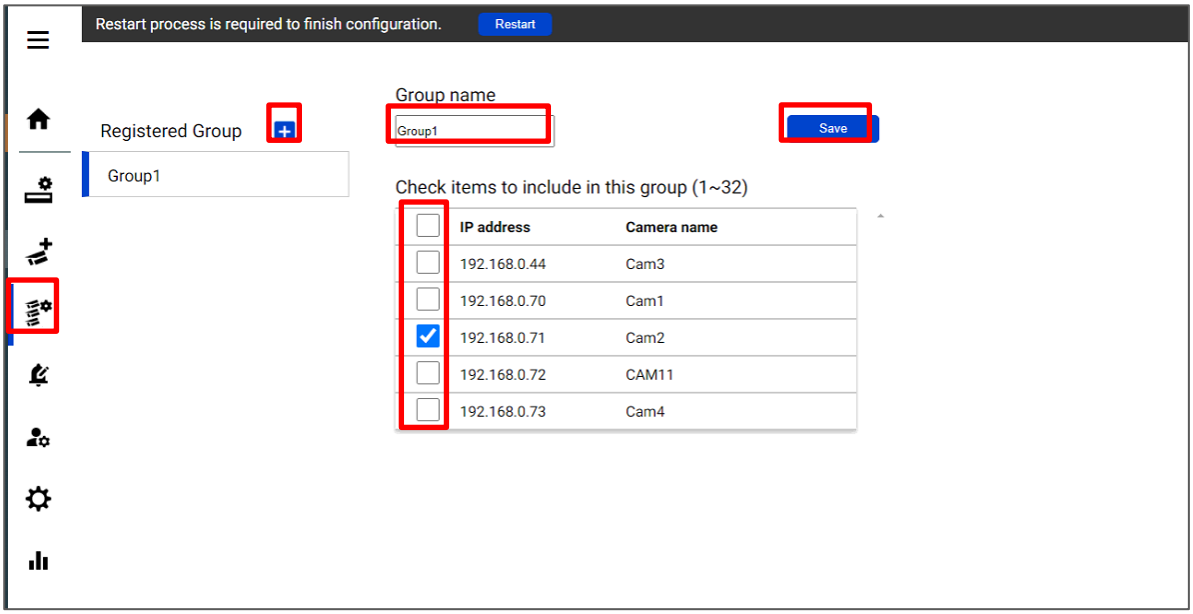
If you want to delete it, select the row and click [Delete].

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).



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

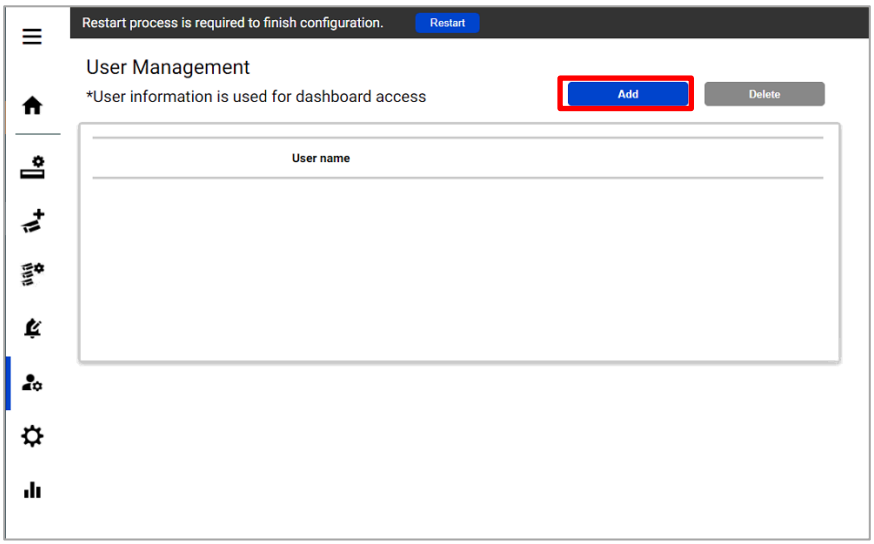
Note) Up to 16 groups can be configured.

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].



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

: Camera is connected.

: Camera is not connected.

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

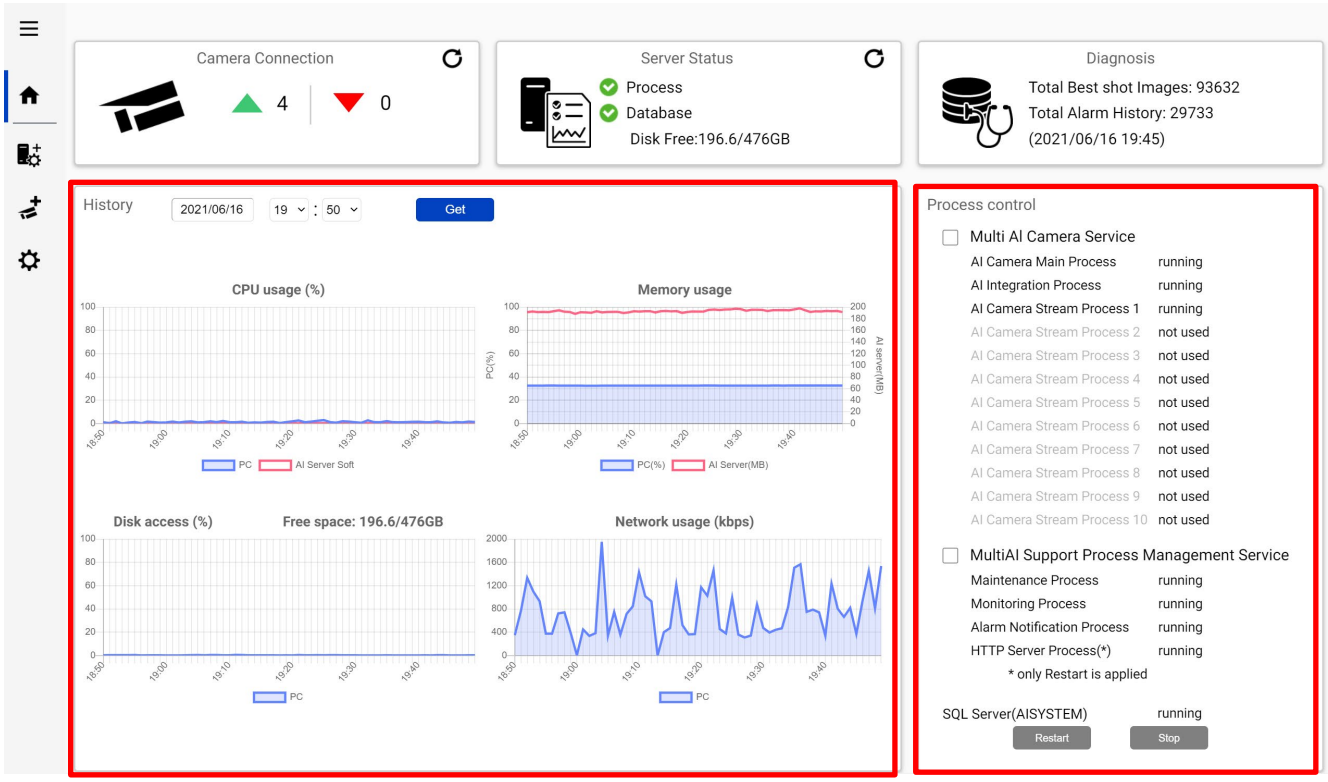
Metadata session is connected, but AI application on camera side may not work well. Check AI application on camera side is installed, schedule setting is on and also check whether “Last received time”.

“**Last received time**” shows the last detection time that the camera detected face, people, vehicle 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

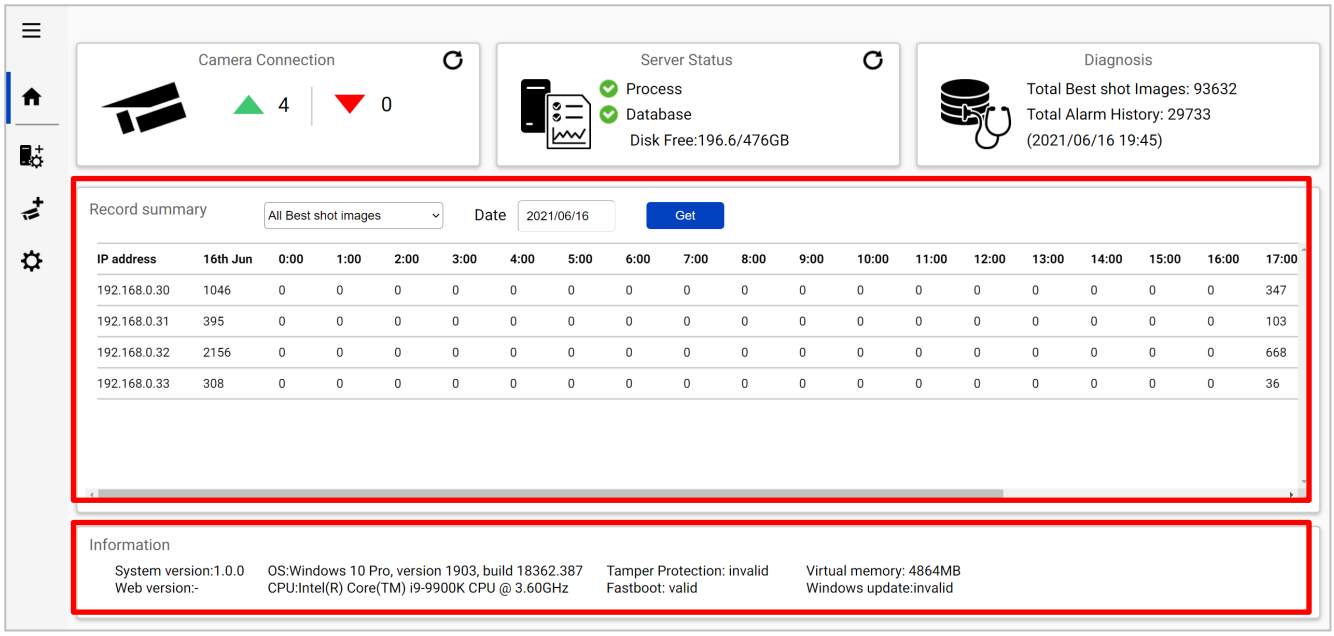
History shows CPU usage, Memory usage, Disk access and Network usage of the i-PRO Active Guard server. CPU usage and Memory usage show the total value in the PC and i-PRO Active Guard server.
Data for one hour from specified date is shown. Select date and [Get] for previous date (within 31 days can be 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



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.

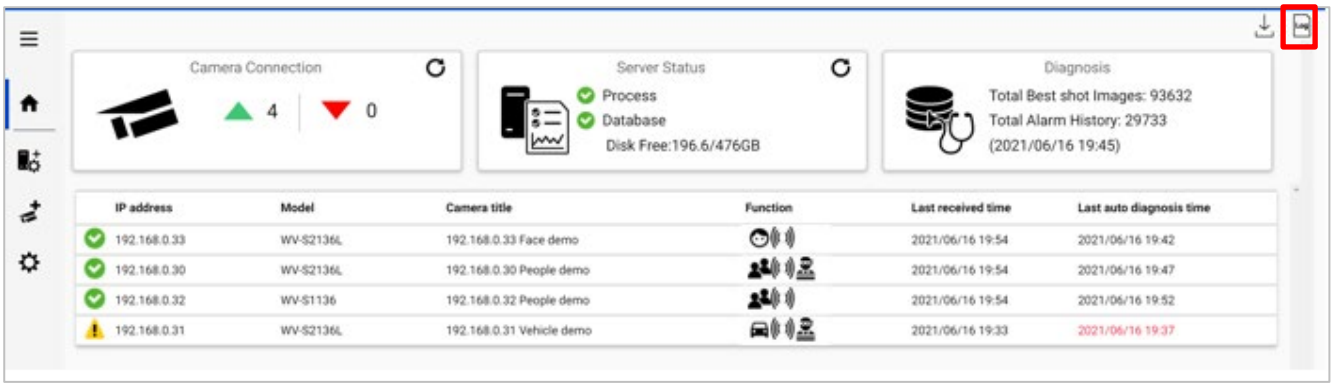
*Selectable items

- All Best shot images
- Face Best shot images
- People Best shot images
- Vehicle Best shot images
- All alarm
- Registered face detection
- Registered people detection
- AI-VMD
- Sound detection
- AI Occupancy detection
- Registered vehicle detection
- AI Scene Change detection

Information

Software version, OS, windows configuration are shown.

4.1.8.4. Display log

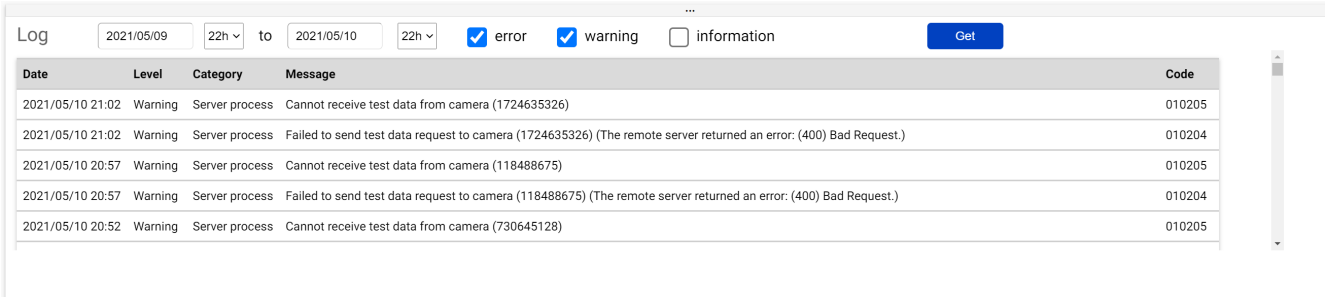


Click

to show logs.

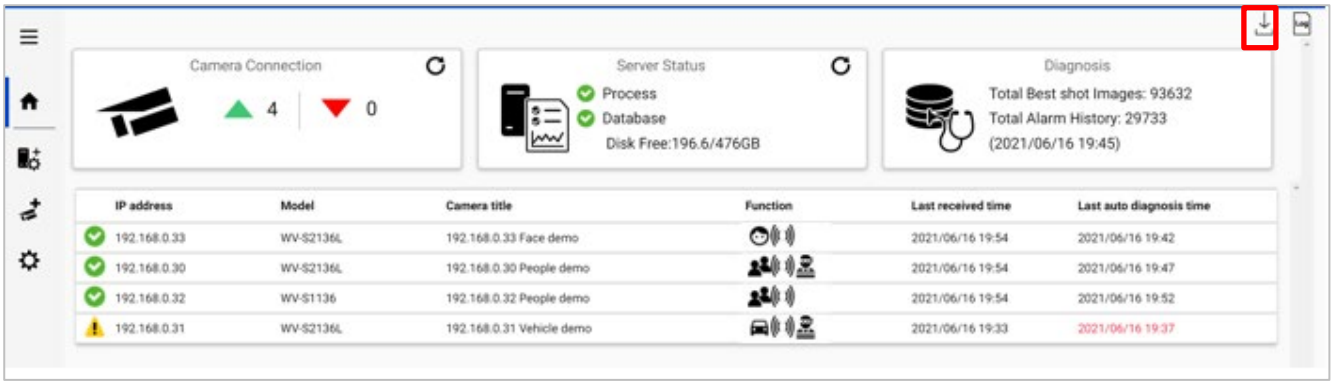
Overview of system error can be displayed. Select date and error level ([error], [warning] and [information]) and click [Get].

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

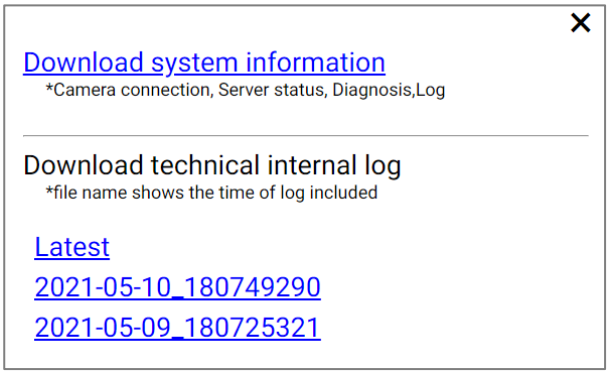


Note) Maximum 1000 logs can be shown at the same time.

4.1.8.5. Download log



Click ⬇ to download log.



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.

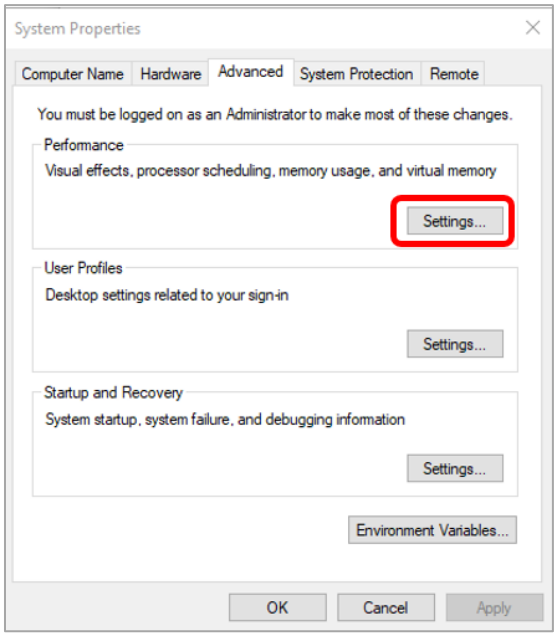
4.1.9.2. Disable Windows Update service

Windows updates are important to keep the system up to date, but auto update may require unplanned restart and some new 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.

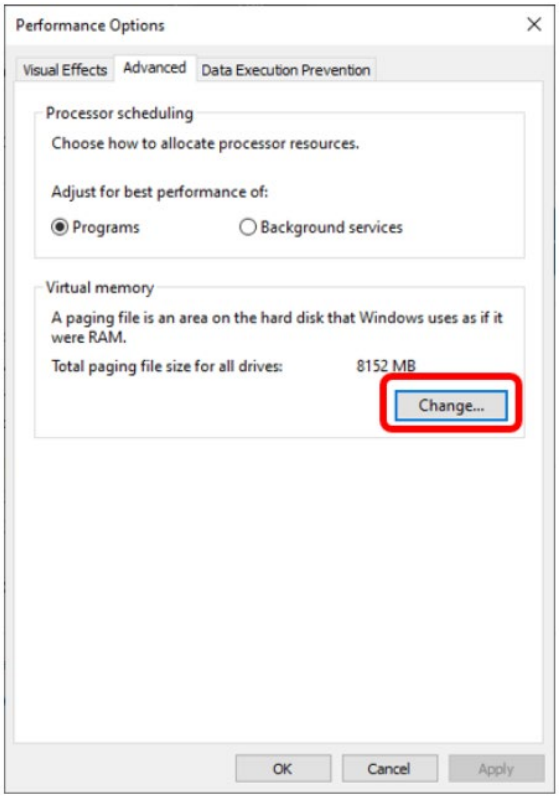
4.1.9.3. Virtual memory setting

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

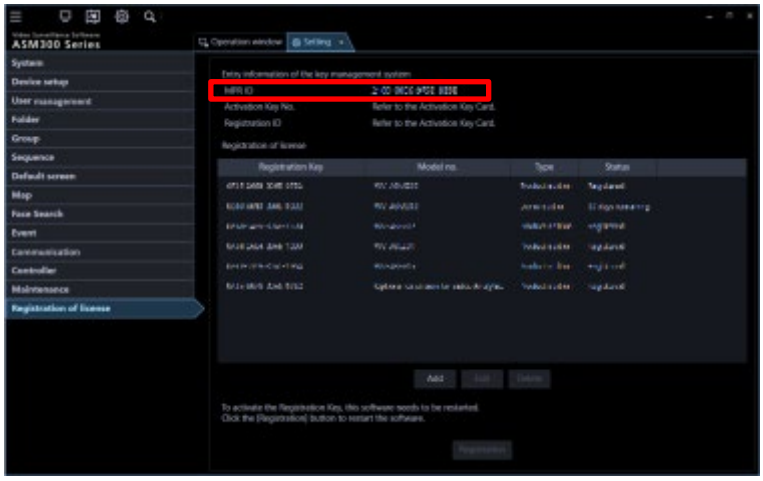
4.2.1. Obtain the Registration Key

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.

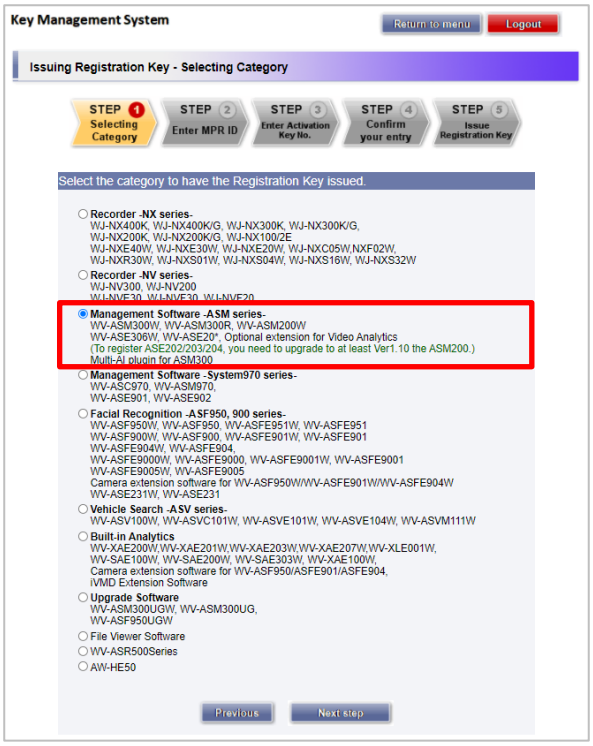
Please create your User ID and password, if it is the first time to access this system.

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/global/en/surveillance/training-support/documentation-database-list/. Installation and configuration can be done from WV-ASM300.

STEP1

Execute [EnablePlugin.exe] included in downloaded folder.

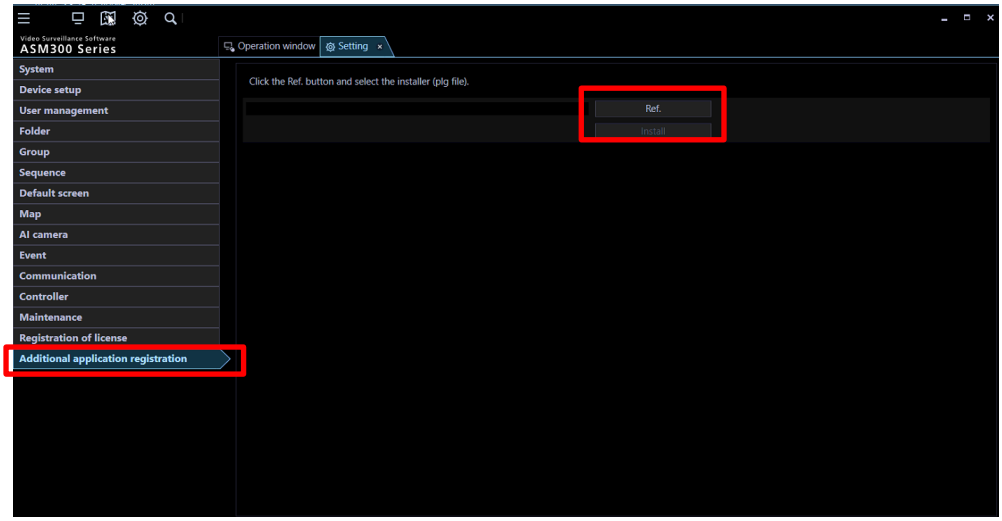
STEP2

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].

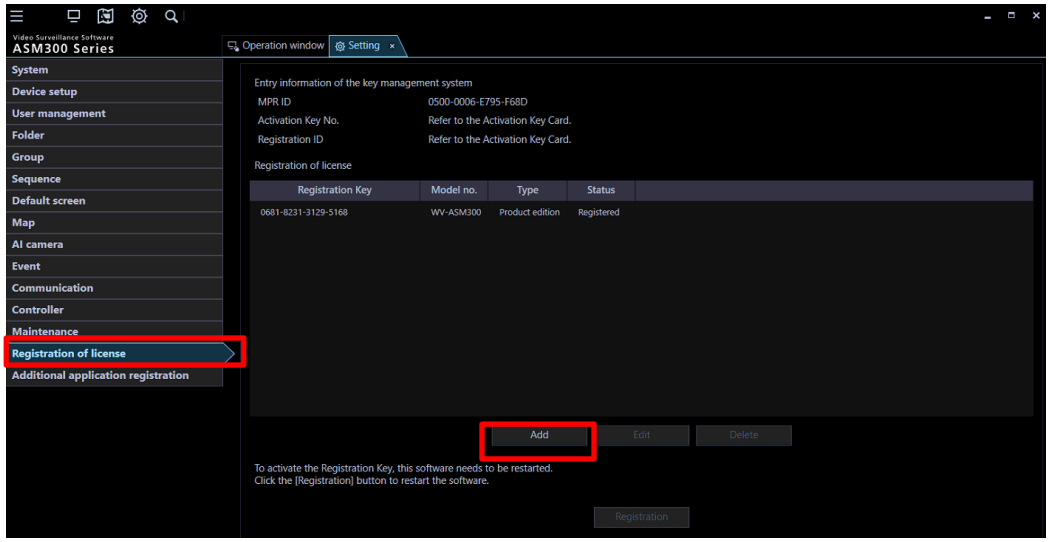


STEP4

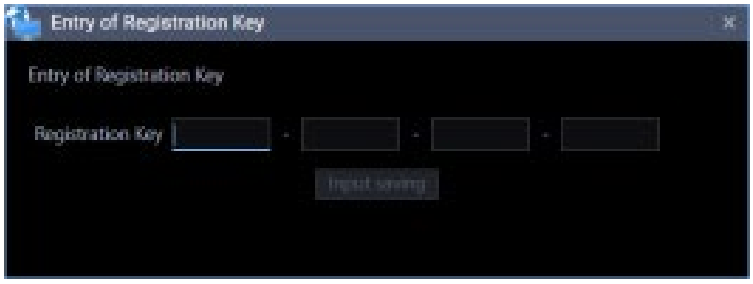
Follow the instructions on the screen to proceed with the installation.

STEP5

Select [Registration of license] and click [Add]



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

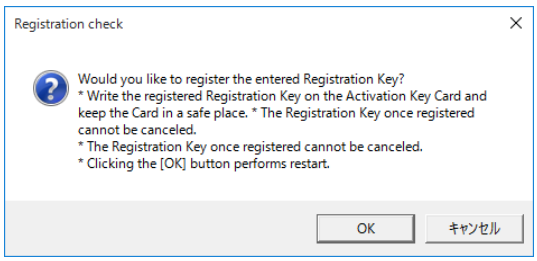


STEP6

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.



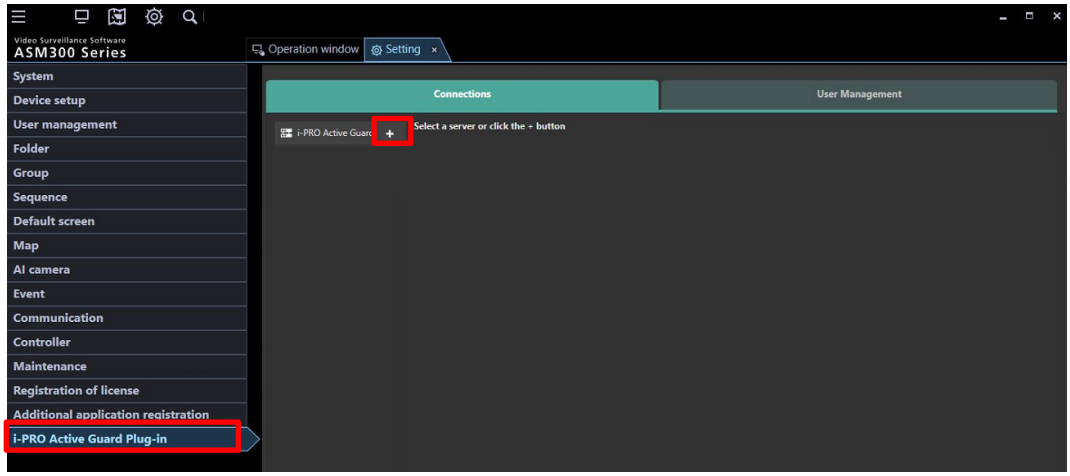
Important:

- [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.

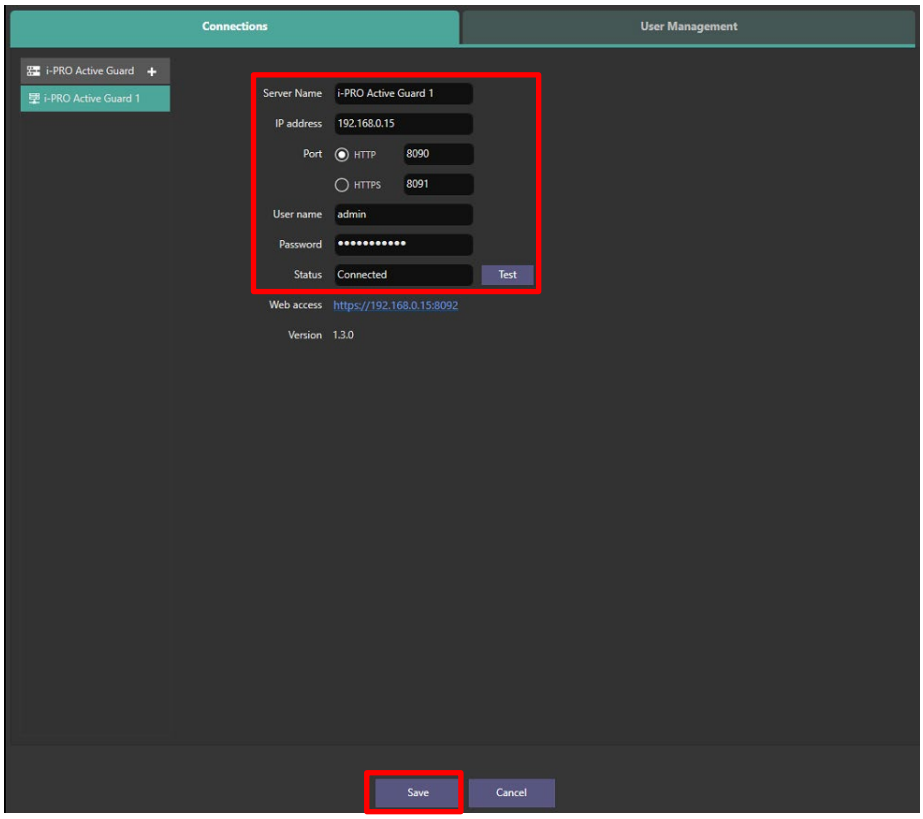


STEP2

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].

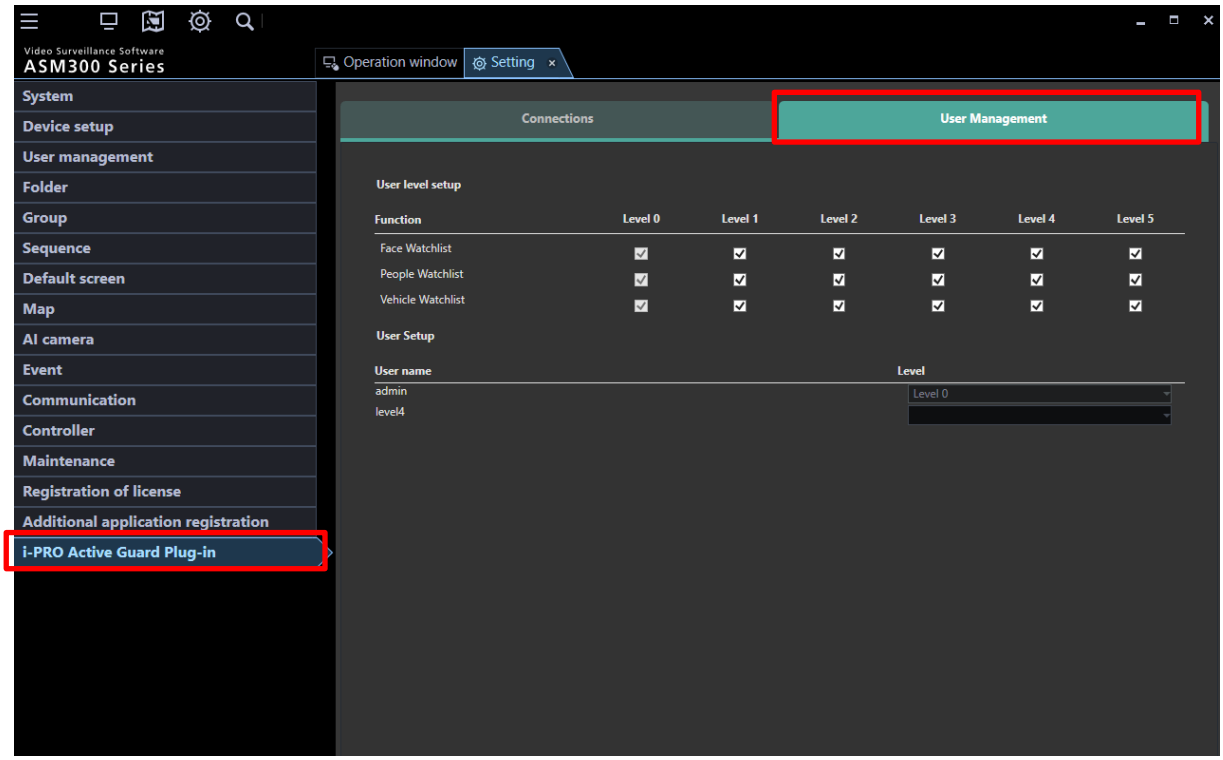


Note)

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

4.2.4. User Management (Optional)

Configure [User Management] for [Face Watch list] , [People Watchlist] , [Vehicle Watchlist] access.



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

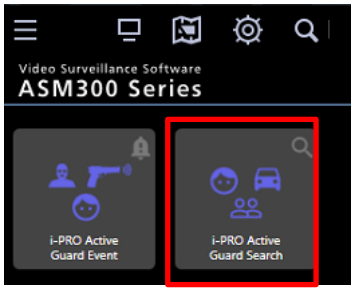
If WV-ASM300 is running, close it and then start it again.

STEP1

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

STEP2

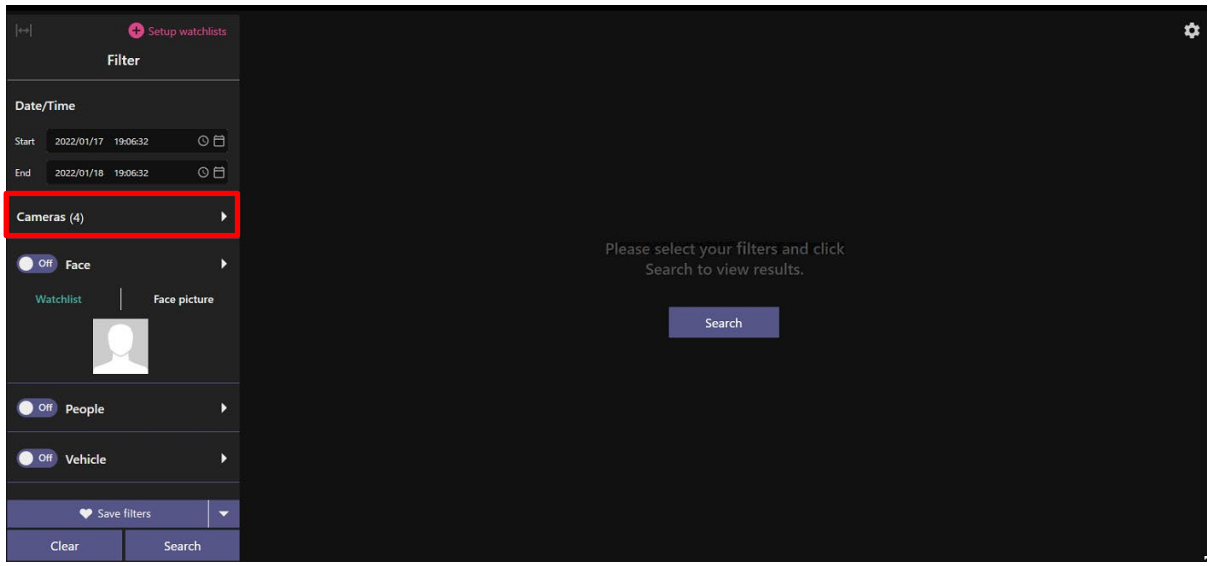
Click [i-PRO Active Guard Search]



STEP3

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

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



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

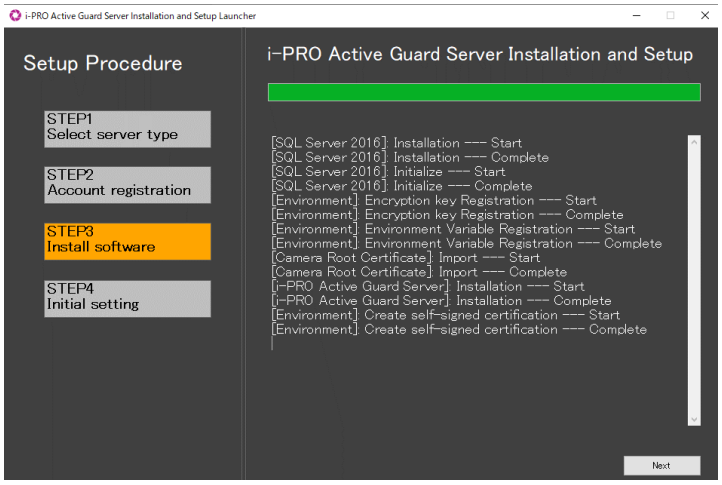
4.3. Upgrade i-PRO Active Guard server

[Important]

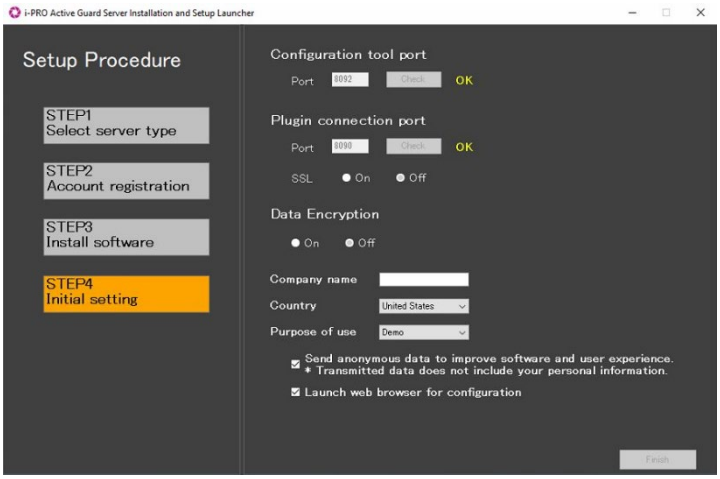
When upgrading the version of i-PRO Active Guard server, do not uninstall the already installed version. If you uninstall it, you will not be able to use the past data.

Execute "MultiAIStartup.exe" as administrator (file path length must be less than 120).

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



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



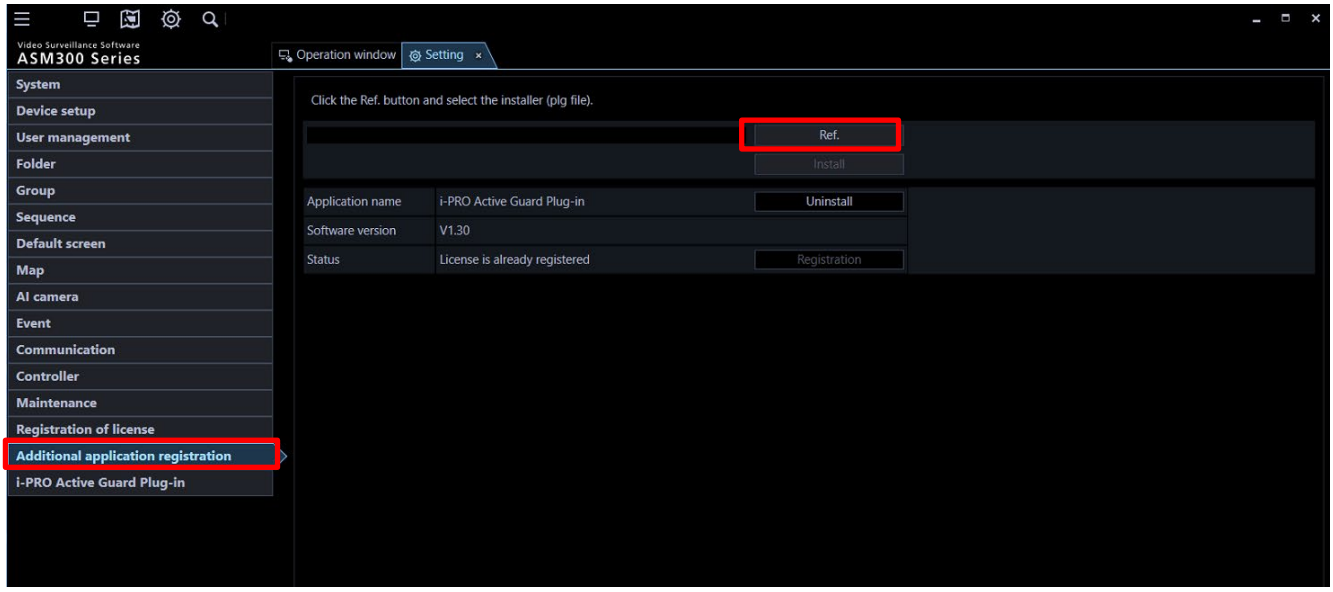
Click [Finish].

4.4. Upgrade Plug-in

STEP1

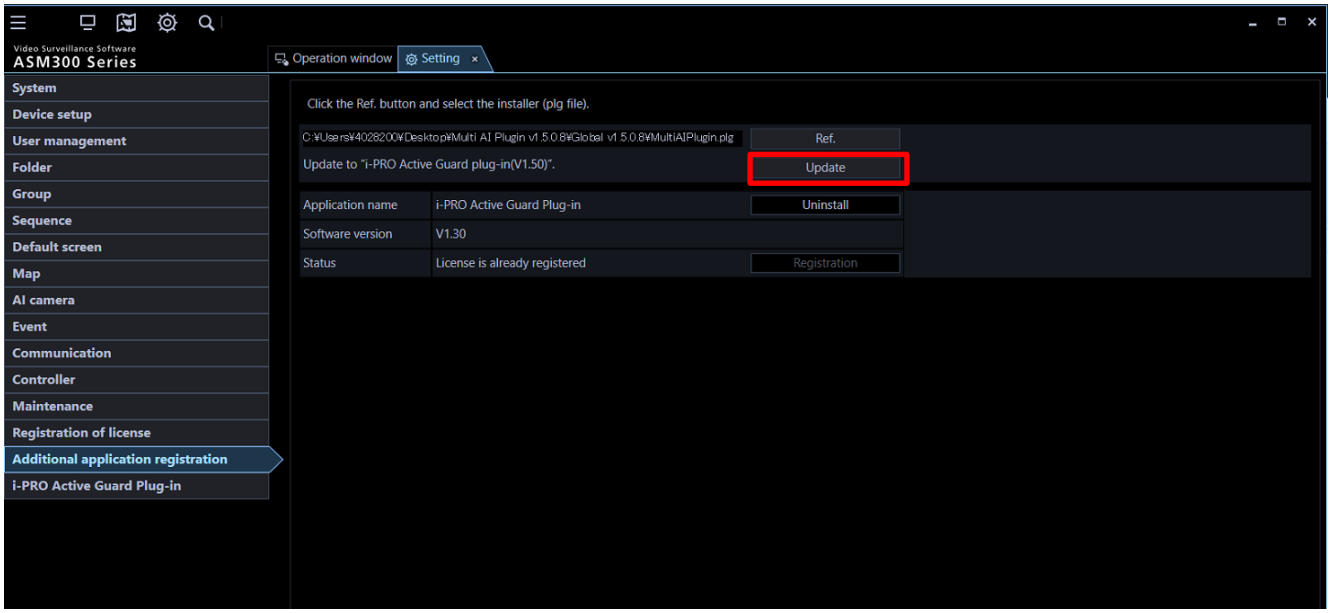
Start Operation Software of WV-ASM300 and login as administrator.

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 camera

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.

5.1.2. Add recorder

STEP1

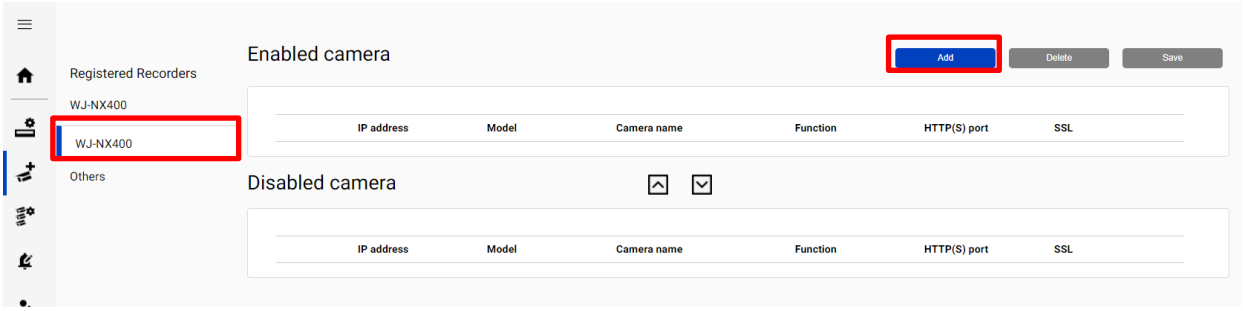
Register camera to recorder and registered the recorder to WV-ASM300.

STEP2

Add recorder to i-PRO Active Guard server. (Refer to 4.2.1).

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.

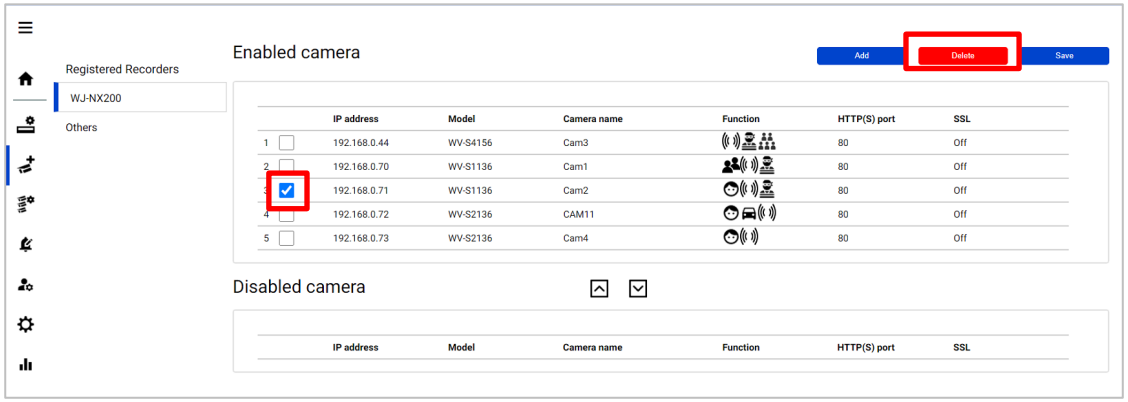
5.2. Delete system device

5.2.1. Delete camera

STEP1

Check camera and [Delete] from Register Cameras screen.

Existing data of the selected camera will be unavailable.



STEP2

Restart process (Refer to 4.1.3)

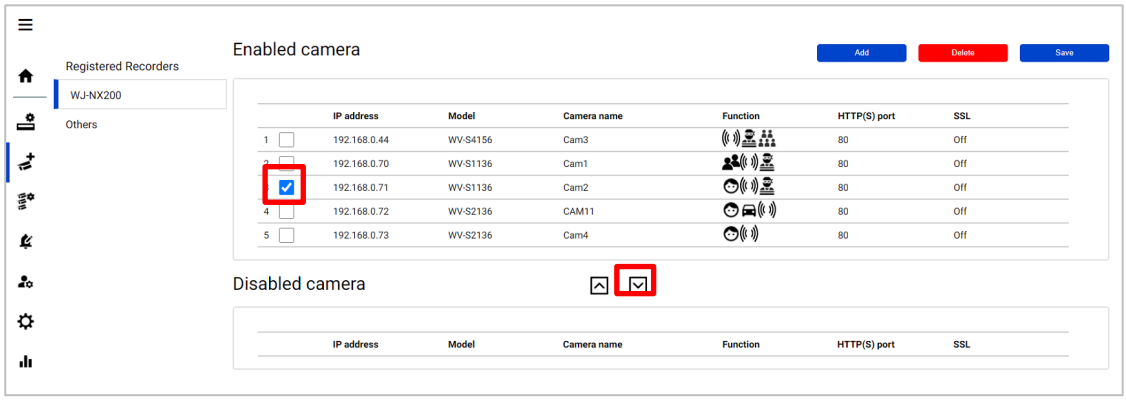
5.2.2. Disable camera

When you want 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

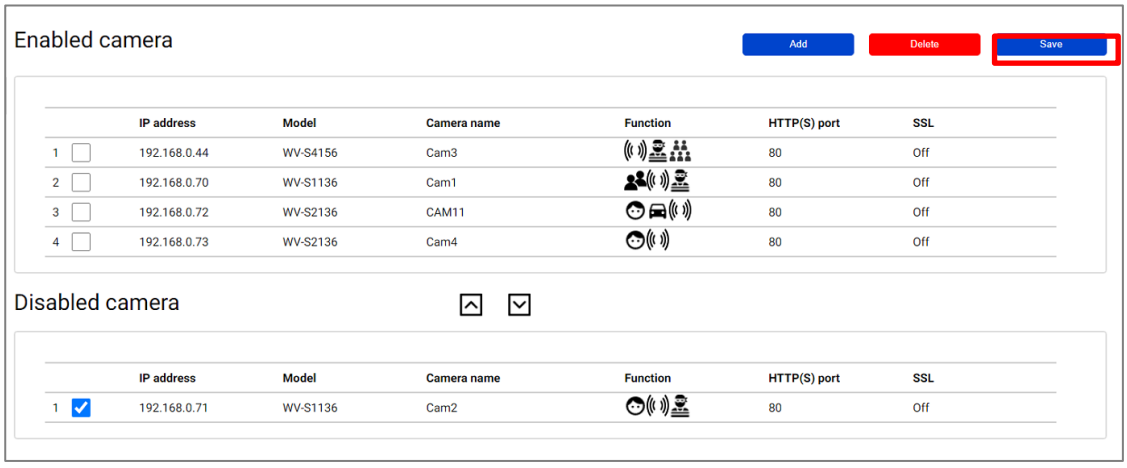
Check camera and move to Disabled camera from Register Cameras screen.

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



STEP2

[Save]



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

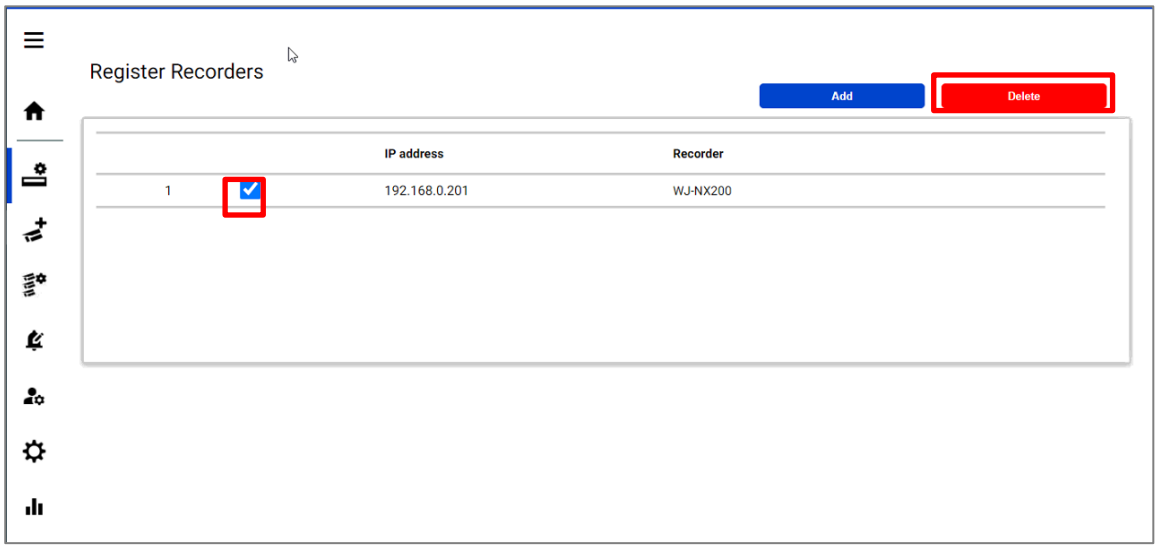
STEP1

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 are 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 delete when retention period exceed.



STEP2

Restart process (Refer to 4.1.3)

5.3. Add or Change camera’s extension software

STEP1

Install or change extension software.

STEP2

Click [Get 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)

5.4. 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

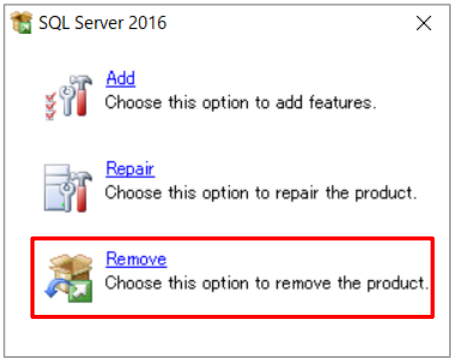
Find [Multi AI Plugins – Server] and [Uninstall].

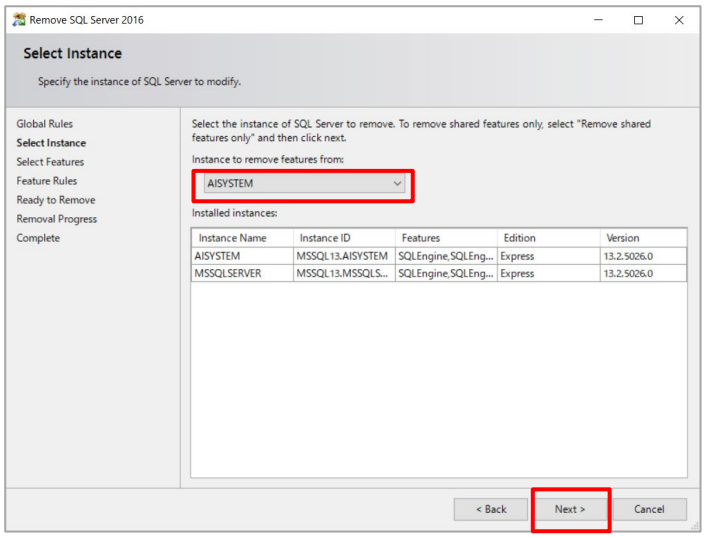
Delete “C:¥MultiAI” folder if exist.

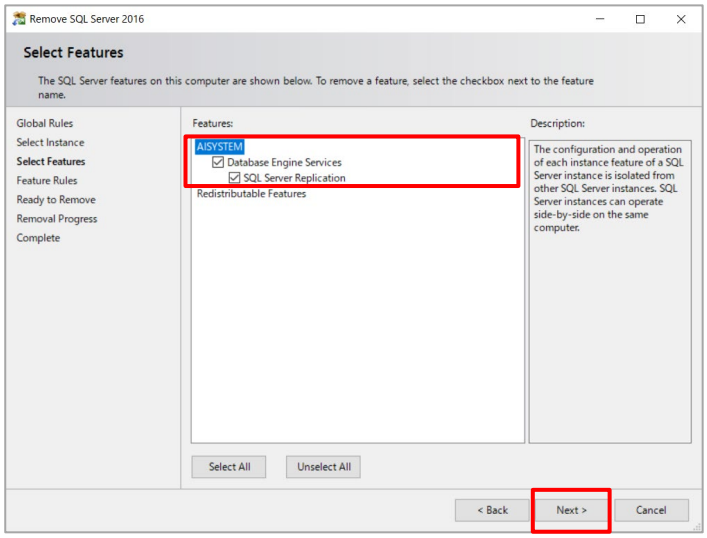
STEP3

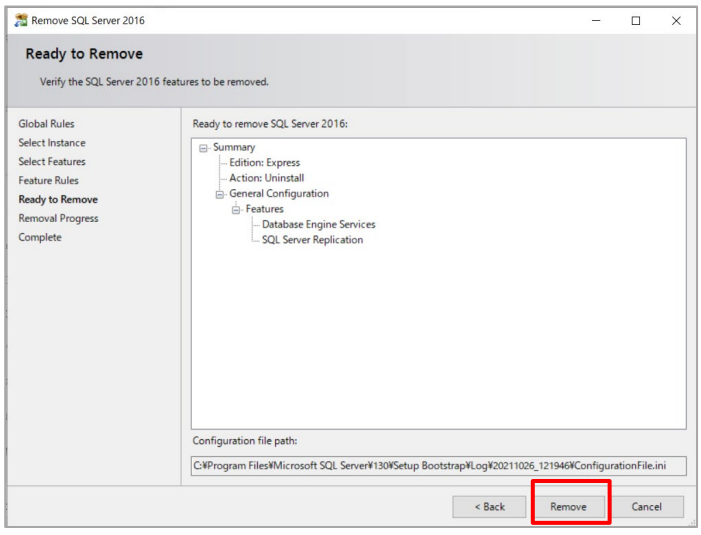
Find [Microsoft SQL Server 2016 (64 bit)] and [Uninstall].

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.

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

STEP4

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

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

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 “C:¥Program Files¥Microsoft SQL Server¥MSSQL13.AISYSTEM¥MSSQL¥DATA” and replace existing files.

STEP4

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

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

STEP5

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

STEP6

Start – Windows Administrative Tools – Services.

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

STEP7

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

STEP8

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

STEP9

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. 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.

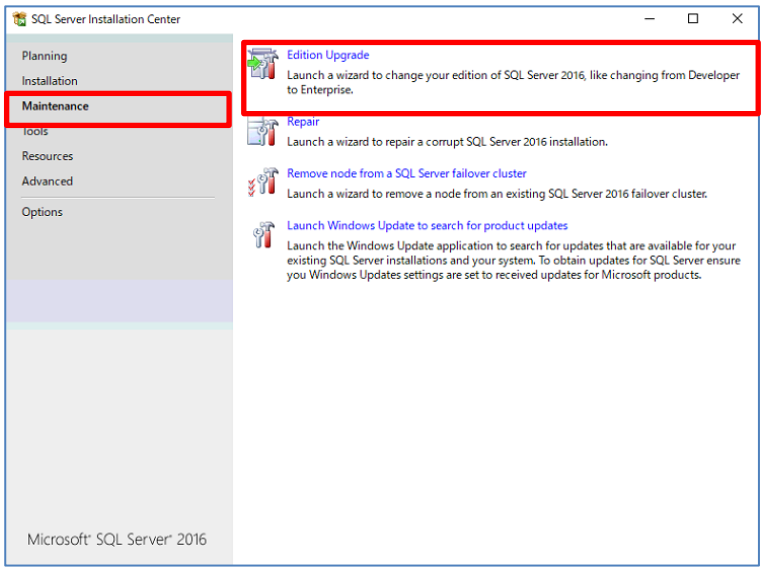
i-PRO Active Guard server software need to be installed in advance.

STEP1

Start [setup.exe] from install media of SQL server Standard Edition.

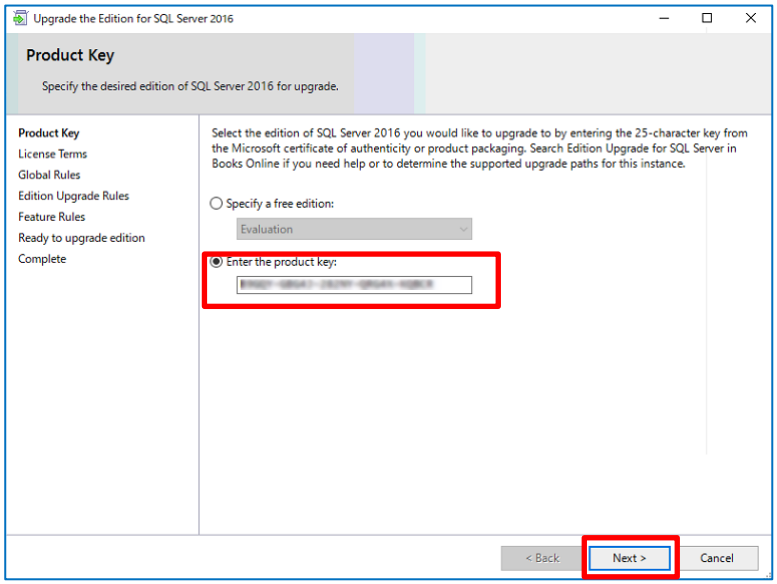
STEP2

Select [Edition Upgrade] from Maintenance.



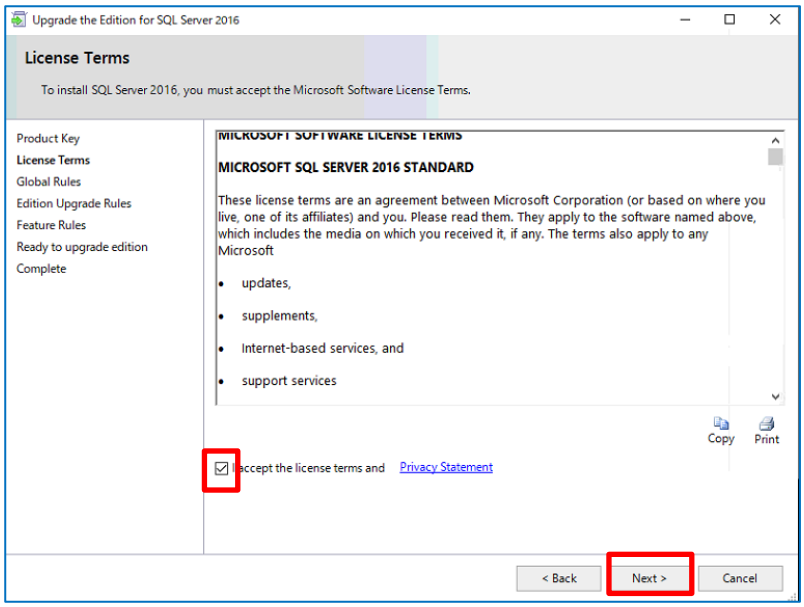
STEP3

Confirm product key is shown and click [Next].



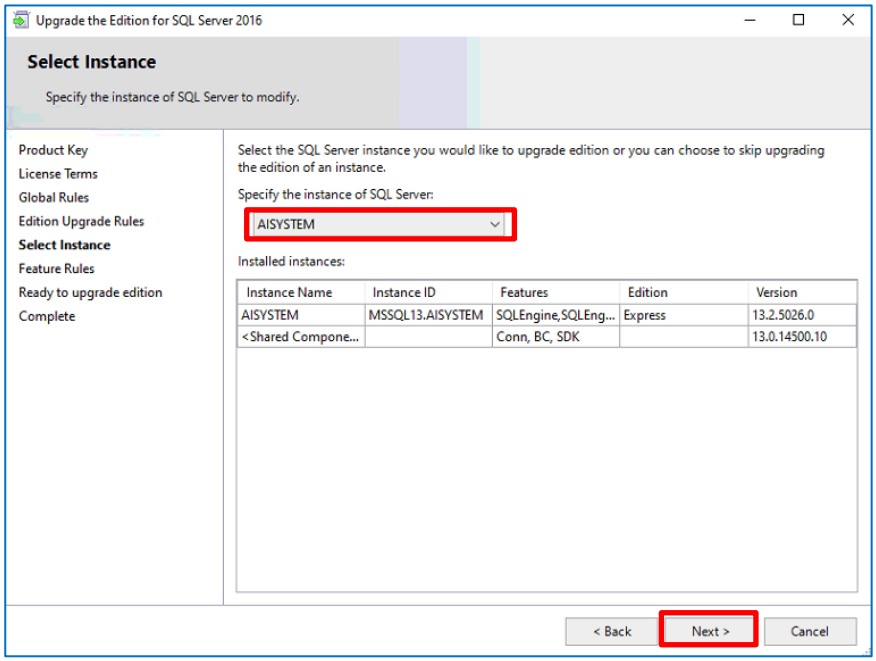
STEP4

Check for license term and click [Next].



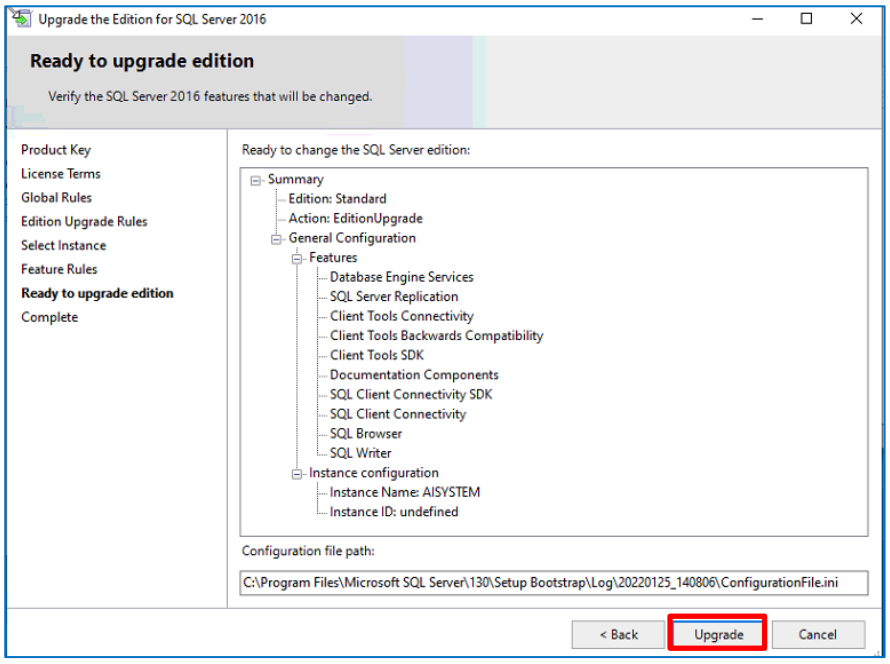
STEP5

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



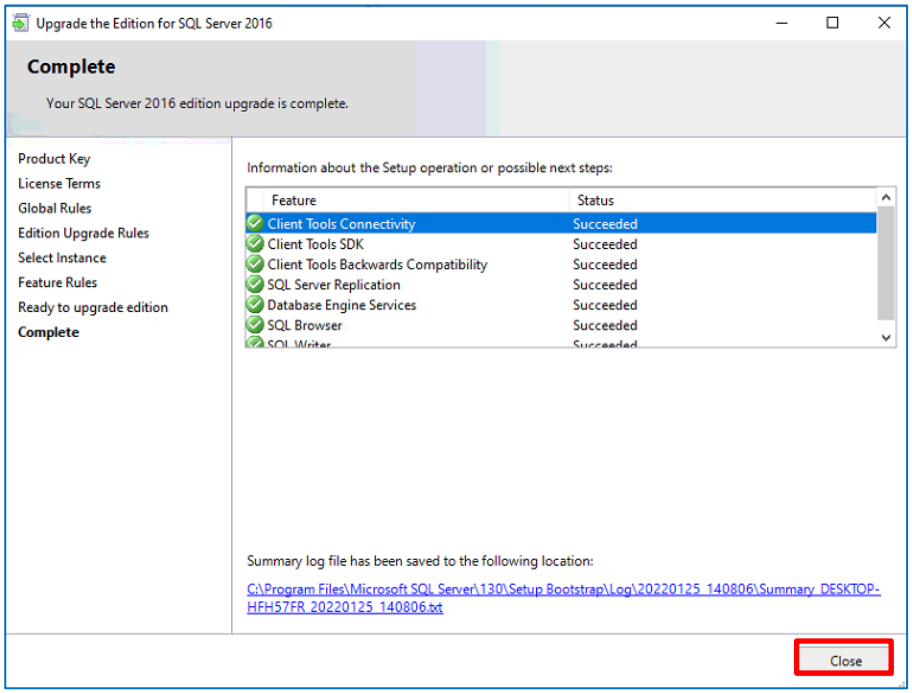
STEP6

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, delete folder C:¥Program Files¥Microsoft SQL Server¥MSSQL13.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 120 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	-
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

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
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.])	-
Face, People or Vehicle 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 images cannot be searched from Plug-in (the number of search result is 0).	Receiving status from each cameras 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.	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.	-
	Firewall configuration issues.	-

	Check if i-PRO Active Guard server's program are listed on "Allowed apps and features" for firewall settings.	
Cannot connect from Plug-in to i-PRO Active Guard server.	Check if IP address, port, protocol and credentials are correct. Port and credentials can be changed from i-PRO Active Guard configuration.	4.1.5.2 4.2.3
Playback time is incorrect.	Check if PC time of i-PRO Active Guard server and recorder are synchronized.	-
Registered face detection or registered people detection cannot be shown	Check if i-PRO Active Guard server detect alarm from diagnosis on i-PRO Active Guard configuration. If alarm exists, check the process status of i-PRO Active Guard server.	4.1.8.3
	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	Check if [EnablePlugin.exe] was executed correctly. If you have changed the ASM300 installation path from the default, please do the following: 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 staring 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	Services related to i-PRO Active Guard server does not exist. Please install i-PRO Active Guard server again
	1025 – 1028 4097 – 4100 4354,4357, 4610,4611	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 or Vehicle Images cannot be searched from Plug-in (the number of search result is 0).	66052,66053	Receiving status from each cameras 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 is searched)	-	To avoid false detection, refer to manual of extension software.

High CPU usage, memory usage or disk access	65793,65794 65796,65797	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. 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) If the usage of i-PRO Active Guard server is low and those of whole PC is high, check the influence of other software.
Reach the max disk space of image (delete old images)	65795	Old images has been deleted by exceeding the settings for “Max usage of image storage drive”. If you need to store data for “Retention period”, configure mask area on camera side to reduce the number of detection.

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 camera	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 60)
	Number of client	No limitation (depending on limitation of VMS)
	Number of Recording server	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
	For dashboard	AI Face Detection, AI People Detection, AI Vehicle Detection, AI-VMD/AI People Counting for 360-degree fisheye camera, AI-VMD, AI Occupancy detection
Store	Retention period	Max. 31 days limitation for face, people or vehicle data / Max. 92 days limitation for people counting data * Max. 366 days by upgrading SQL Server Standard edition or higher
Post Search	Filter	People, Vehicle (attribute, date & time, camera, moving direction), 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, Ascending, Relevance (Face , People and Vehicle)

Alarm	Watch list alarm	Up to 1,000 faces, Up to 12 people attributes, Up to 12 vehicle attributes
	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
	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 Recording server
	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. Data update interval is minimum 15 seconds for people/vehicle counting and 1 min for heat map. 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. Vehicle attribute statistics when using AI Vehicle Detection. Data update interval is minimum 1 min.
	Customize	Contents, display size, location for each chart. 3 Layouts per user can be saved and 24 user can be registered. (Up to 4 user 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