

Auto Tracking Server Software

Operation Manual

Introduction

Auto Tracking Server Software is application software that runs on Windows.

By operating this software on a Windows Server PC to which a Panasonic remote camera is connected, tracking of persons shot by the remote camera can be performed simultaneously by multiple remote cameras.

Main Functions

The main functions of this software are as described below.

1. Tracking assist for persons

The tracking of a person selected from the images shot by the remote camera can be assisted. Stable tracking operation can be performed by the face recognition function that detects the face of the set person, and also by human body detection through deep learning.

2. Simultaneous tracking by multiple remote cameras

The tracking operation can be performed by simultaneously controlling up to four remote cameras per one server. By increasing the number of servers, the number of remote cameras controlled simultaneously can also be increased.

3. Auto detection of tracking target

The face of a person in the images shot by the remote camera can be detected automatically and tracked.

4. Setting the display position of the tracking target

You can set the position on the screen on which the tracking target is to be displayed.

5. Setting the Zoom magnification during tracking

The zoom magnification of the camera image during tracking can be set.

6. PTZ control of the remote camera

Pan/Tilt control and Zoom position control can be performed for the remote camera.

The limitation of the working range of Pan/Tilt can be set or canceled.

7. Registering/calling the remote camera preset

MainThe Pan/Tilt/Zoom position of the remote camera can be registered or called as a preset.

8. Image adjustment of the remote camera

You can adjust the Focus/Iris/Gain/WB/Shutter/ND Filter for the remote camera.

Caution

- This software detects and tracks a single target, such as the lecturer of a lecture recording, and does not track a single target among several targets, and is also not meant to be used when there are several moving objects within the camera angle.
- Since this software uses image processing, the target may be wrongly detected. In order to deal with situations where the target is wrongly detected, use this software in an environment in which the correction task can be performed by the operator.
- Depending on the shooting environment (camera angle, distance, and speed), the camera may not be able to track the target (the tracking target may be lost). In order to deal with situations where the target is lost, use this software in an environment in which the correction task can be performed by the operator.

Operating Environment

The below-mentioned environment is necessary for using this software:

- Server PC

- CPU

- When up to 2 cameras can be connected simultaneously

- Core i7-9700 3.00GHz 1P/8core or above

- When up to 4 cameras can be connected simultaneously

- Xeon W-2255 3.70GHz 1P/10core or above

- Memory: 16 GB or above

- OS: Windows Server 2012 R2

- Windows Server 2016

- Windows Server 2019

- Windows 10

- When human body detection is performed through deep learning

- GPU

- Pascal architecture

- NVIDIA GeForce GTX 1080 or later

- NVIDIA Quadro P4000 or later

- Turing architecture

- NVIDIA GeForce RTX 2080/2080Ti

- NVIDIA Quadro RTX 4000 or later

- or

- Xeon CPU with 8 physical cores or more

* If using a GeForce RTX or Quadro RTX for the GPU, please use Windows 10 or Windows Server 2016 or Windows Server 2019 for the operating system.

- Client PC

CPU: Core i5-2520M 2.50 GHz or above

Memory: 4 GB or above

Display: 1920 x 1080 or above

Web browser: Google Chrome

- Panasonic remote camera

AW-UE100

AW-UE150

AW-UE70

AW-HE130

AW-HE40

AW-HE42

AW-UE4

<Notes>

- Before using this software, you must install Google Chrome in the client. You may download and install it from the Google site.
- Use the latest version of the remote camera firmware. You can download the firmware from the following Website:

<http://pro-av.panasonic.net/en/>

- Panasonic recommends a wired network connection between the server and remote camera. In the case of a wireless connection, sufficient tracking performance may not be achieved.
- When using GPU for human body detection through deep learning, you must install CUDA Toolkit in the server pc.

When using a GPU with Pascal architecture, please install CUDA Toolkit 8.0 referring to the following procedure.

https://www.pass.panasonic.co.jp/pro-av/support/content/download/DEF/soft/man/CUDA_Toolkit_8.0_InstallationProcedures_jpn.pdf

When using a GPU with Turing architecture, please install CUDA Toolkit 10.1 referring to the following procedure.

https://www.pass.panasonic.co.jp/pro-av/support/content/download/DEF/soft/man/CUDA_Toolkit_10.1_InstallationProcedures_jpn.pdf

About the Server Configuration

Although this software can operate on one server too, the number of remote cameras that can be controlled simultaneously can be increased by configuring the software with multiple servers.

Among the servers configuring this software, one server is set as the Main server for centralized management, and the remaining are set as the Sub servers for expansion.

For details on the method of setting the server, refer to the Installation Procedures.

About the License

This is paid software.

To enable you to test the functions of the software, we offer a trial period of 90 days from the day of start of the trial of this software. Therefore, you can use it for free during this period, but you must purchase the key code (license) after the expiry of the trial period, and activate the software.

For details, refer to the “License” section of this manual.

About the Descriptions in this File

- The illustrations and screen displays in this file may be different from those in reality.
- In this file, a personal computer is mentioned as a “PC”.

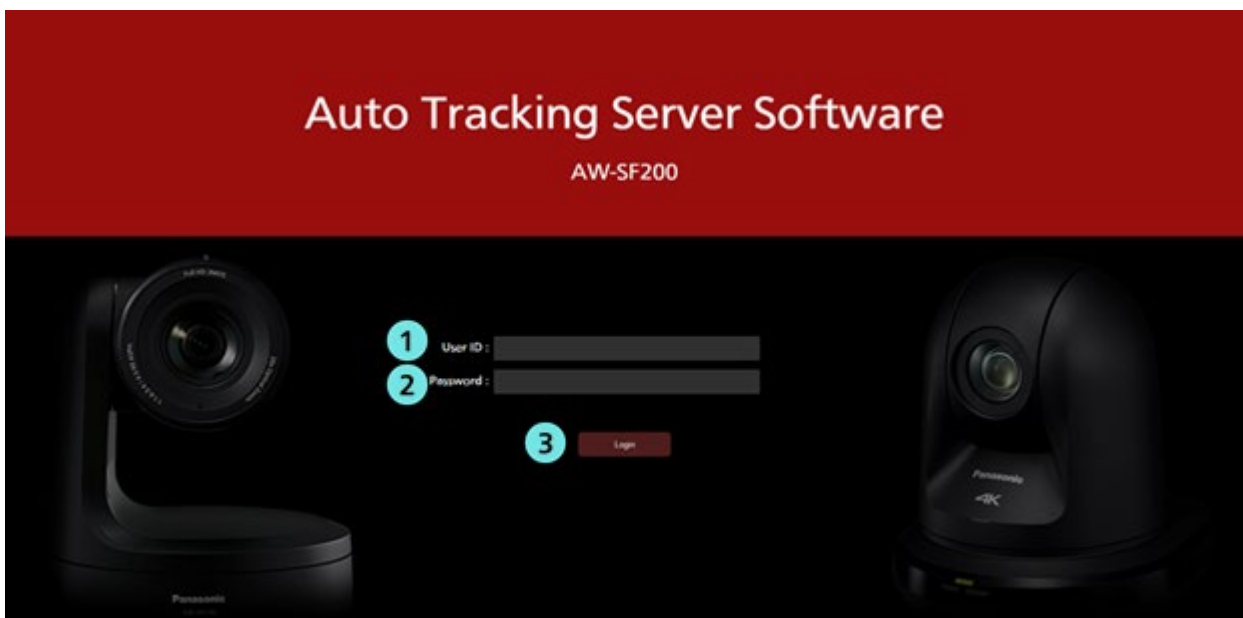
About Registration and Registered Trademarks

- Microsoft, Windows, and Internet Explorer are registered trademarks of Microsoft Corporation in the United States.
- Intel, Intel Core i7, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
- All other names, company names, and product names are trademarks or registered trademarks of each company. TM and the ® mark are not specified in this manual.

Description of Screens

Login Screen

When you connect to the Main server of this software from the Web browser, the Login screen shown below appears.



①User name input

Enter the user name for logging in to this software.

②Password input

Enter the user password.

③Login button

Log in to the software using the entered user name and password.

<Note>

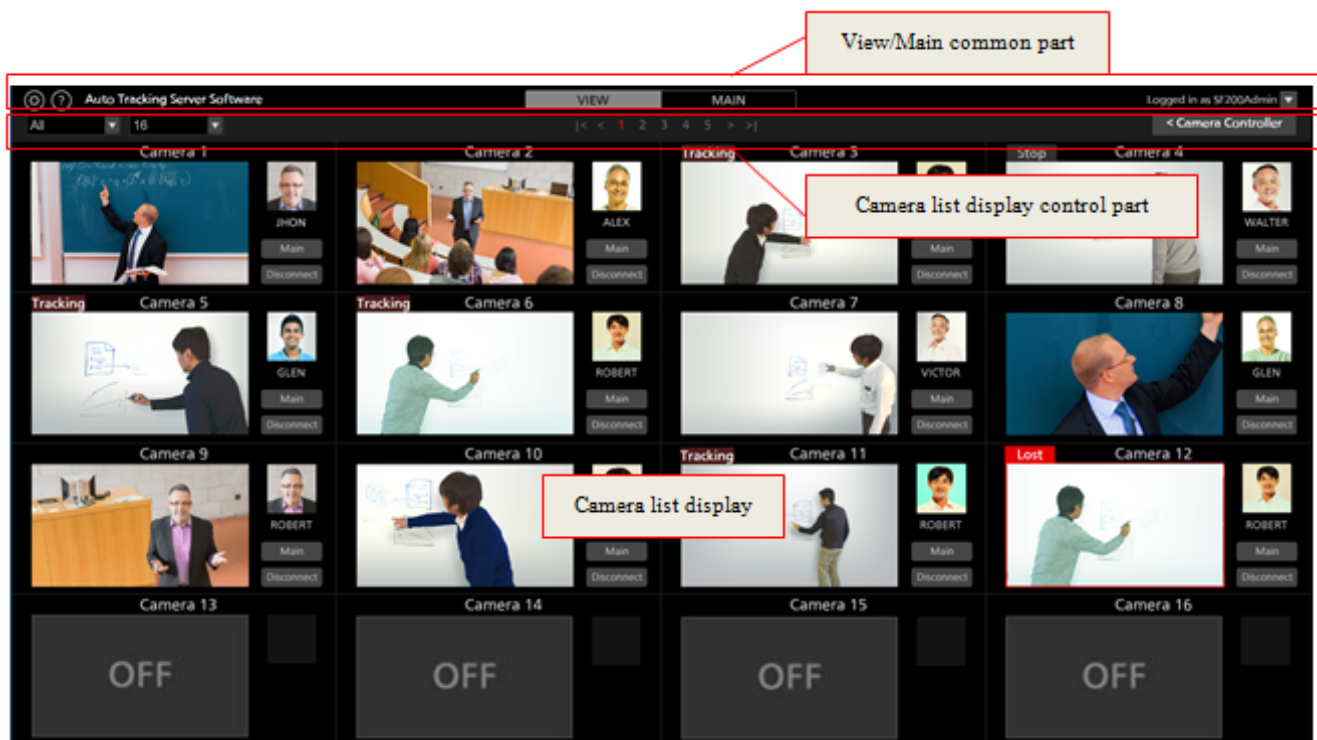
- For details on the default user name and password, and user account registration, check “Settings for the Administrator” in the Installation Procedures.

View Screen

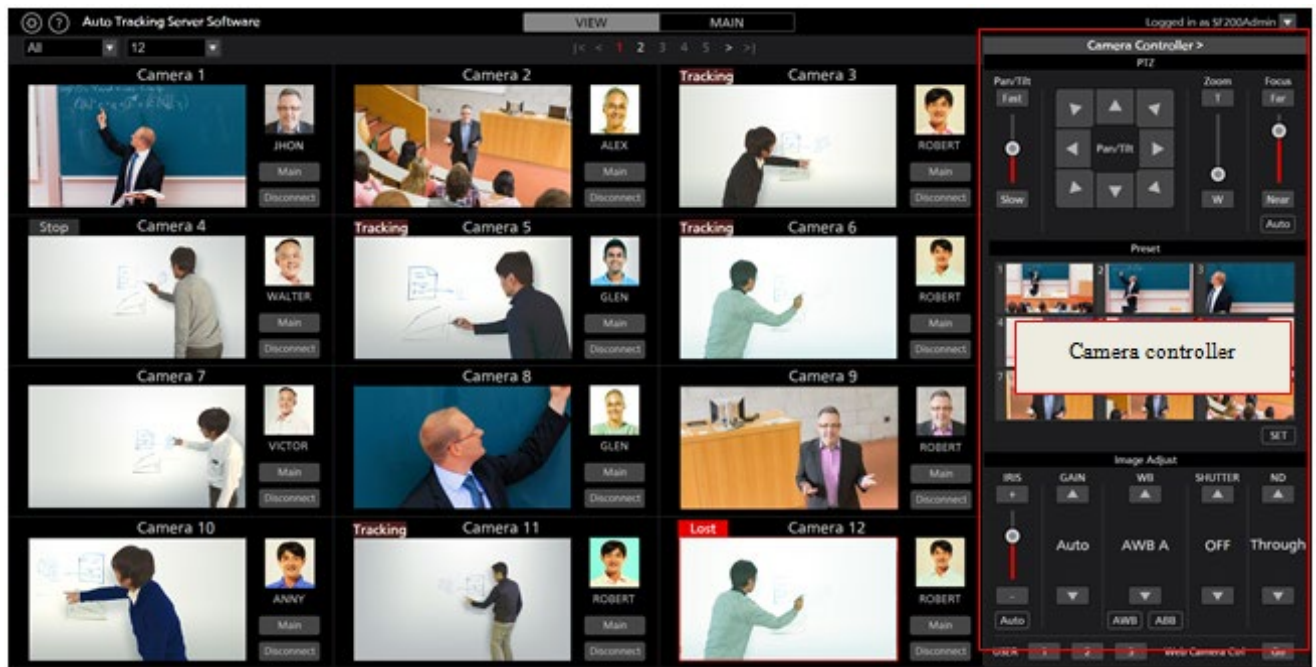
The View screen shown below appears when you log in to this software.

The View screen is configured by the following four areas and displays the list of registered remote cameras together with information such as thumbnails, etc.

- View/Main common part
- Camera list display control part
- Camera list display
- Camera controller (when display is ON)



View screen (Camera controller display OFF)



View screen (Camera controller display ON)

• View/Main common part

The display of the top part of the screen is common in both View screen and Main screen.



①Settings button

Used to move to the Settings screen.

②Help button

Used to display the help file (this document) under another tab of the Web browser.

③View/Main selection tab

Used to switch between the View screen and Main screen.

④License status display

Displays the license status of this software.

For details on the license status, refer to the “License” section of this manual.

⑤Logout/Version menu

Click ▼ to view the menu described below.

Logout: Used to log out from this software and return to the login screen.

Version: Used to view the version information of this software.

• Camera list upper part

Buttons are arranged in the upper part of the camera list display for switching the list display.



①List showing filtered display of the list of cameras

From the drop-down list, filter the cameras to be displayed.

Filtering can be performed based on the following conditions:

All: All cameras are displayed

Lost: Only cameras for which the tracking target has been lost out of sight are displayed

Tracking: Only cameras for which the tracking operation is being performed are displayed

Stop: Only cameras that are in the state prior to the start of tracking are displayed

[Category name]: Only cameras belonging to the category registered in Category on the Settings screen are displayed

②List for selecting the display count from the list of cameras

The number of cameras to be displayed per page is changed from a drop-down list.

③Page selection button

Used to select a page in the camera list display.

④Show/hide camera controller selection button

Used to show or hide the camera controller.

• Camera list display

Display contents of each camera in the camera list display. The background of the selected camera appears in red color.



① Status display

Displays the status of the camera.

Lost: This is the state in which the tracking target has been lost

Tracking: This is the state during tracking

Stop: This is the state prior to the start of tracking

Disconnect: This is the state in which a connection has not been established with the camera

② Camera name display

Displays the name of the registered camera.

③ Thumbnail image display

Displays the thumbnails of camera images.

If the camera is not found (the power is OFF, or the camera is not connected to the network, etc.), “OFF” is displayed.

④ Tracking target face image display

Displays the face image of the person selected as the tracking target.

⑤ **Tracking target name display**

Displays the name of the person selected as the tracking target.

⑥ **Main screen display button**

Used to switch to the Main screen.

⑦ **Connect/Disconnect button**

Used to connect or disconnect the remote camera.

• **Camera controller**

The camera controller provides various operating functions of the camera. The camera selected in the camera list display is the operating target.

For details on the operating method, refer to the “Operation of the Camera Controller” section of this manual.



① **PTZ control part**

You can perform Pan/Tilt/Zoom control for the remote camera.

② **Focus control part**

You can perform Focus control for the remote camera.

③Preset control part

You can perform Preset control for the remote camera.

④Image Adjust part

You can adjust the images shot by the remote camera.

⑤USER button

This button does not function in the current version.

⑥Web Camera Ctrl button

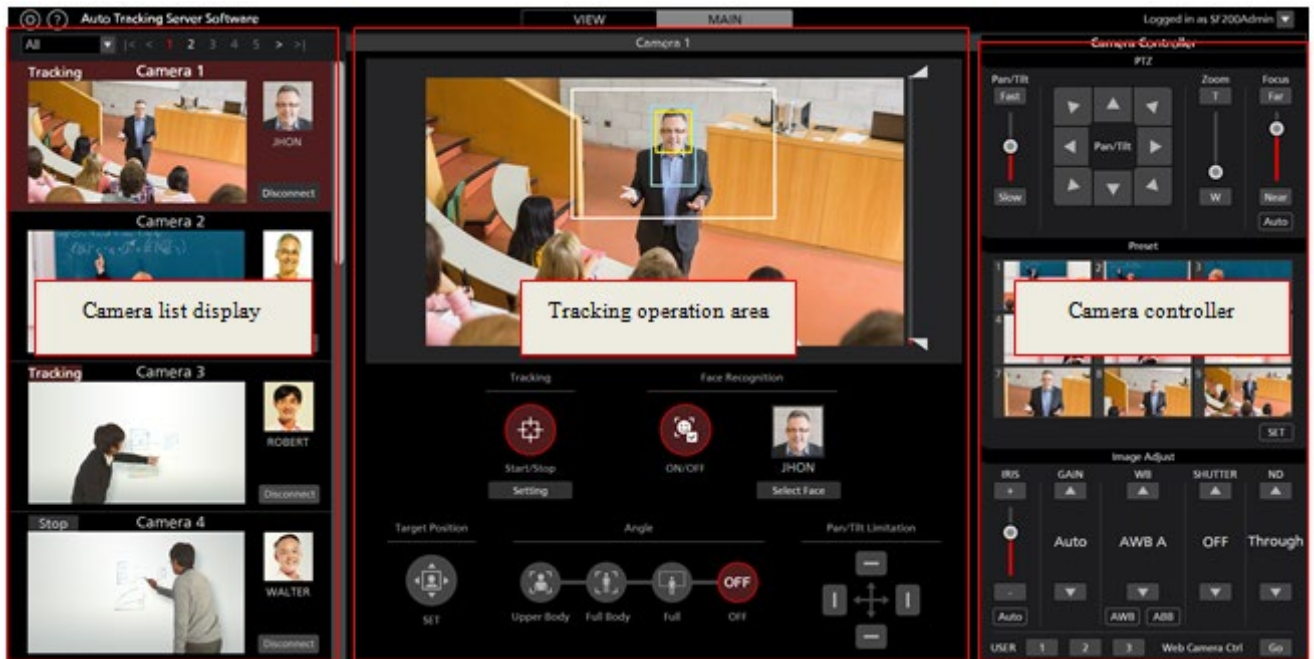
Click the Go button to open the Web management screen of the remote camera on the Web browser.

Main Screen

If you click the Main tab at the top of the screen, the Main screen appears.

The Main screen is configured by the following three areas:

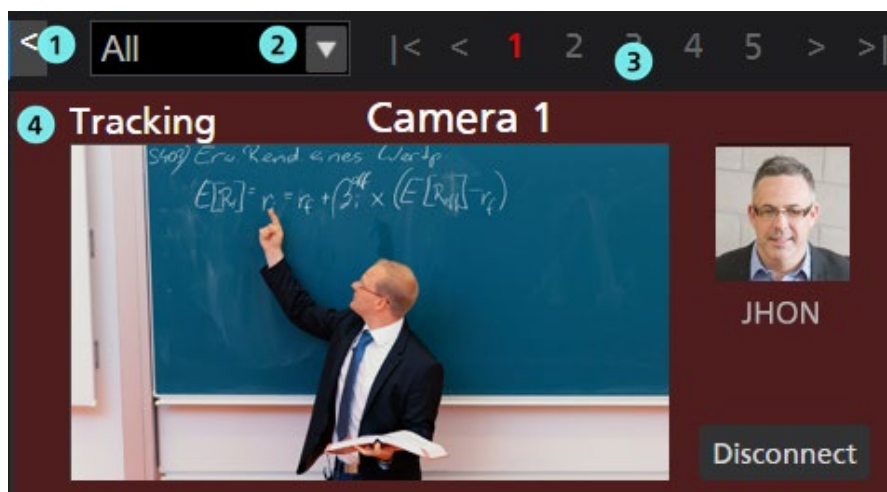
- Camera list display
- Tracking operation area
- Camera controller



Main screen

• Camera list display

In the camera list display area of the Main screen, each camera is arranged vertically.



① Display ON / OFF switching button

Switches the camera list display ON / OFF.

② List showing filtered display of the list of cameras

From the drop-down list, filter the cameras to be displayed.

The function is same as that on the View screen.

③Page selection button

Used to select a page in the camera list display.

④Camera list display

Displays the status of each camera.

This area is same as that on the View screen except that the Main button does not exist.

• Tracking operation area

The buttons for performing the tracking operation are arranged in this area. The camera selected in the camera list display is the operating target.



①Camera name

Displays the registered name of the camera for which operations are to be performed.

The background becomes red in color if the tracking target is lost out of sight.

②Camera image

The image acquired from the remote camera is displayed.

③Tracking target display

This is a rectangular display that shows the tracking target.

- When the tracking method is Template matching

The blue-framed rectangle shows the position of the tracking target.

Also, if the face of the tracking target is detected, a yellow-framed rectangle is displayed.

No frame is displayed if a tracking target does not exist, or if the tracking target is lost sight of.

- When the tracking method is Deep Learning (CPU) or Deep Learning (GPU)

The blue-framed rectangle shows the position of the tracking target and the red-framed rectangle shows the detected human.

Also, if the face of the tracking target is detected, a yellow-framed rectangle is displayed.

No frame is displayed if a tracking target does not exist, or if the tracking target is lost sight of.

④Mask area setting slider

Used to set the mask area (the area that is not used during detection within the camera images) when detecting the tracking target.

The area can be set at both the top and bottom of the screen.

⑤Tracking Start/Stop button

This button is used to set whether to perform the Pan/Tilt operation of the remote camera if a tracking target exists.

ON (red color):

The Pan/Tilt operation is performed in accordance with the movement of the tracking target.

OFF (gray color):

The Pan/Tilt operation is not performed.

⑥Tracking setting button

Click to view the Tracking Setting window.

⑦Face Recognition ON/OFF button

This button is used to set the operation of the face recognition function.

ON (red color):

The face recognition function is used.

A process is performed for comparing the face of the person that is set as the recognition source and the face detected in the camera images, and only the face determined to be of the same person is set as the target of the tracking process.

If the recognition source has not been set, all faces detected in the camera images are set as the target of the tracking process regardless of whose face it is.

OFF (gray color):

The face recognition function is not used.

⑧Face setting display

The face photograph and name of the person set as the recognition source of face recognition is displayed.

⑨Select Face button

Used to display the Select Face window.

In the Select Face window, you can select the face data to be used as the recognition source of face recognition.

⑩Auto Face Search checkbox

If this checkbox is selected, the face of the person registered for face recognition, and the face detected in the camera image are compared, and if either person is detected, tracking is performed for that person.

⑪Add Face button

This button displays the Add Face screen for registering the face data of the person for face recognition.

⑫Target Position Set button

Used to set the operation when a camera image is left-clicked.

ON (red color):

When you left-click the camera image, the display position of the tracking target changes to the clicked position.

OFF (gray color):

When you left-click the camera image, the object that exists at that position is set as the tracking target.

⑬Angle specification button

This button specifies the angle of view during tracking.

Upper Body :

Sets the angle of view so that the part of the body of the tracking target above the chest is displayed.

Full Body :

Sets the angle of view so that almost the entire body of the tracking target is displayed.

Full :

Sets the angle of view so that the tracking target and its surroundings are displayed.

OFF :

Retains the current angle of view.

⑭Pan/Tilt Limitation ON/OFF button

This button is used to set the Pan/Tilt limitation of the camera. The limitation in each direction can be set to ON/OFF with the use of the four Top/Bottom/Left/Right buttons.

• Camera controller

The function is same as that on the View screen.

• Tracking Setting window

This window appears when you click the Setting button in the Tracking field of the Main screen.

You can make settings regarding the tracking operation in this window.

The screenshot shows the 'Tracking Setting' window with the following settings and callouts:

- 1: Auto Tracking Start : ☐
- 2: Stop Tracking with manual preset recall : ☐
- 3: Trigger of lost state judgement : Body
- 4: Duration before judgement of lost state : 5 (1-30) Sec
- 5: Home position : Preset 1
- 6: Duration before execution of home position preset : 3 (1-30) Sec
- 7: Sensitivity Level(1-10) : 5
- 8: Tracking Disable Area (X, Y, Width, Height) : 0 0 0 0
- 9: OK button
- 10: Cancel button

①Auto Tracking Start

Set the operation to be performed when the tracking target is detected.

If the check mark is ON, the tracking operation of the camera starts automatically when the tracking target is detected.

②Stop Tracking with manual preset recall

Sets the operation to be performed when a preset is called.

If the check mark is ON, tracking operation is stopped when a preset is called.

③Trigger of lost state judgement

Sets the subject for lost state judgment.

Body:

Triggers lost state judgment when no body is detected.

Face:

Also triggers lost state judgment when no face is detected for a specified time even after a body has been detected.

④Duration before judgement of lost state

Sets the time (in seconds) before the judgment of lost state is made after a face is no longer detected when Face is selected in trigger of lost state judgement.

You can set a value in the range of 1 to 30.

⑤Home position

Set the operation to be performed when the tracking target is lost.

NONE:

The camera position remains the same after the tracking target is lost.

Preset 1 to Preset 9:

When the stipulated time elapses after the tracking target is lost, the camera position is returned to the specified preset position.

⑥Duration before execution of home position preset

When the Home position is set to Preset 1 to Preset 9, set the time (secs.) from when the tracking target is lost until when the camera position is returned to the preset position.

You can set a value in the range of 1 to 30.

⑦Sensitivity Level

Set the sensitivity of the tracking operation of the camera with respect to the movement of the tracking target as a value in the range of 1 to 10.

The higher the value, the higher the sensitivity.

⑧Tracking Disable Area

Set the area in which the tracking operation of the camera is not to be performed.

You can set the width up to 640 and the height up to 360.

The camera does not perform the tracking operation when the tracking target moves inside the area set here.

This area can also be set by right-clicking on the camera image and dragging.

When canceling the setting, right-click outside the range of the camera image.

⑨OK button

Used to enable the setting and close the window.

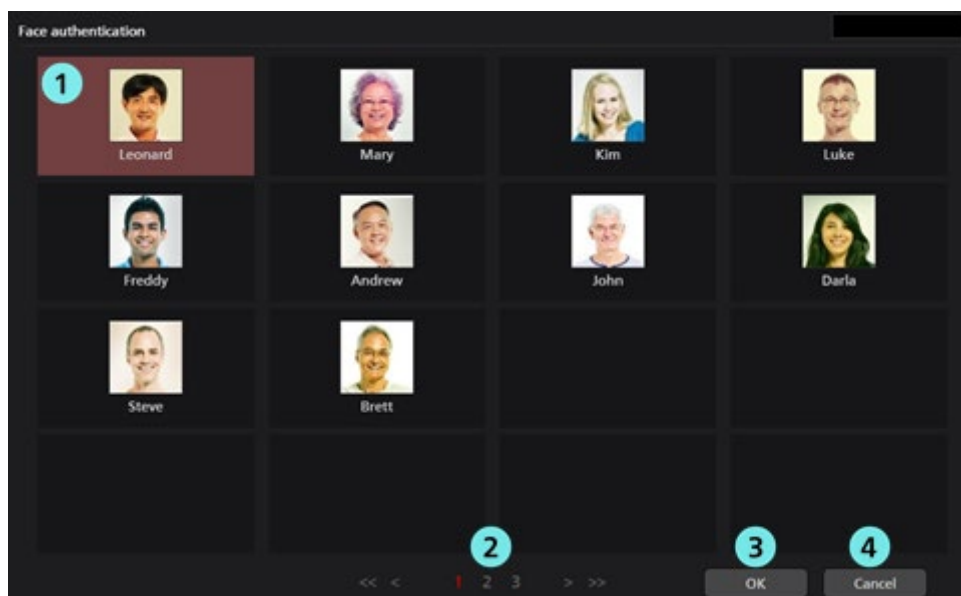
⑩Cancel button

Used to cancel the setting and close the window.

• Select Face window

This window appears when you click the Select Face button on the Main screen.

On this window, you can set the face of the person that is the tracking target.



①Face data list display

This is a list of the registered face data.

You can select or cancel the face data by clicking. The background of the selected face data appears in red color.

②Page selection button

You can select a page in the face data list display.

③OK button

Used to enable the setting and close the window.

④Cancel button

Used to cancel the setting and close the window.

Settings – Control Screen

This screen is used to make the settings of the servers configuring this software.

Click the Settings button at the top left of the screen, and then click the Control tab at the center of the screen to move to this screen.

For details on the server settings, refer to “Default Settings - Server Installation Settings” in this manual.



①Hostname

Displays the IP address of the registered server.

②Port No.

Displays the port number that each server uses for communication.

③Description

Displays the description of each server.

④Main

A ● mark is displayed for the server operating as the Main server.

⑤Search box

Used when searching the server by the IP address.

If you enter a numeric value, only the servers that include the numeric value in the IP address are displayed in the list.

To return the display to the original display, clear the entered contents.

⑥Add button

Used to move to the Register Server screen.

⑦Edit button

Used to move to the Edit Server screen.

⑧Delete button

Used to delete the selected server.

You can delete only the Sub servers.

⑨Page selection button

Used to select the page to be displayed.

• Register/Edit Server screen

The display moves to this screen when you click the Add button/Edit button.

You can register a new server and edit already-registered server information.

The screenshot shows a 'System Setting' window with a dark background. At the top, there are five tabs: 'Control', 'Camera', 'User', 'Category', and 'Face Recognition'. The 'Control' tab is selected. Below the tabs, the title 'Add Control' is displayed. There are three input fields: 'Hostname:' with the value '192.168.0.201', 'PortNo:' with the value '8181', and 'Description:' with the value 'Slave Server'. Each input field is preceded by a red circle with a white number (1, 2, and 3 respectively). At the bottom right, there are two buttons: 'OK' and 'Cancel', each preceded by a red circle with a white number (4 and 5 respectively).

①Hostname

Enter the IP address of the server.

②Port No.

Enter the port number that the server uses for communication.

③Description

Enter any optional server description.

④OK button

Used to apply the settings and return to the Control screen.

⑤Cancel button

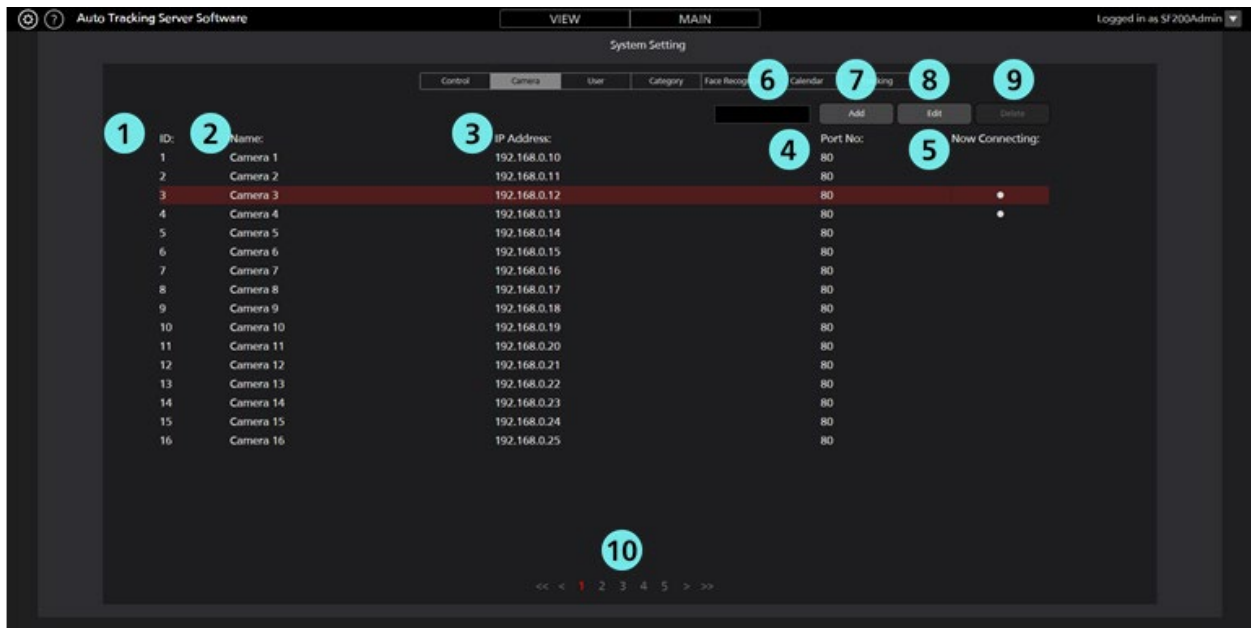
Used to cancel the settings and return to the Control screen.

Settings - Camera Screen

This screen is used to make the settings of the remote camera used in this software.

Click the Settings button at the top left of the screen, and then click the Camera tab at the center of the screen to move to this screen.

For details on the remote camera settings, refer to “Default Settings - Remote Camera Installation Settings” in this manual.



①ID

Displays the registration number of the registered camera.

②Name

Displays the name of the registered camera.

③IP Address

Displays the IP address of each camera.

④Port No.

Displays the port number that each camera uses for communication.

⑤Now Connecting

A • mark is displayed for the camera to which a connection is being established.

⑥Search box

Used when searching the camera by name.

If you enter a string, only the cameras that include the string in the name are displayed in the list.

To return the display to the original display, clear the entered contents.

⑦Add button

Used to move to the Register Camera screen.

⑧Edit button

Used to move to the Edit Camera screen.

⑨Delete button

Used to delete the selected camera.

<Note>

You cannot delete a camera to which a connection is being established.

You cannot delete a camera registered in categories.

⑩Page selection button

Used to select the page to be displayed.

• Register/Edit Camera screen

The display moves to this screen when you click the Add button/Edit button.

You can register a new camera and edit already-registered camera information.

The screenshot shows the 'System Setting' interface with the 'Camera' tab selected. The 'Add Camera' section contains the following fields and options:

- 1 Name: AW-UE79
- 2 IP Address: 192.168.0.20
- 3 Port No: 80
- 4 Login: admin
- 5 Password: *****
- 6 Height: 250 cm
- 7 Distance: 1000 cm (with a dropdown menu showing 'cm' and 'feet')
- 8 Max Zoom: 100 %
- 9 Angle Zoom(Upper Body): 0 % ☒ Auto
- 10 Angle Zoom(Full Body): 0 % ☒ Auto
- 11 Angle Zoom(Full): 0 % ☒ Auto
- 12 Image Capture Type: ☒ JPEG ☐ H.264
- 13 Auto Search button
- 14 Operation after connection: ☒ Facing the front, ☐ Move to preset position (Preset 1), ☐ Do nothing
- 15 OK button
- 16 Cancel button

①Name

Enter any optional remote camera name.

②IP Address

Enter the IP address of the remote camera.

③Port No.

Enter the port number that the remote camera uses for communication.

④Login

Enter the user name of the remote camera.

⑤Password

Enter the password of the remote camera.

⑥Height

Set the height at which the remote camera is installed in cm/feet.

⑦Distance

Set the distance from the position where the remote camera is installed up to the position where the tracking target mainly exists in cm/feet.

⑧Max Zoom

Set the maximum Zoom magnification of the remote camera.

You can set a value in the range of 0 to 100.

⑨Angle Zoom (Upper Body)

Set the Zoom magnification when Upper Body is selected in the Angle specification of the Main screen.

You can set a value in the range of 0 to 100.

The set Zoom magnification is enabled only when Auto check is OFF. When the Auto check is ON, the Zoom magnification is decided automatically from the value of Height and Distance.

⑩Angle Zoom (Full Body)

Set the Zoom magnification when Full Body is selected in the Angle specification of the Main screen.

You can set a value in the range of 0 to 100.

The set Zoom magnification is enabled only when Auto check is OFF. When the Auto check is ON, the Zoom magnification is decided automatically from the value of Height and Distance.

⑪Angle Zoom (Full)

Set the Zoom magnification when Full is selected in the Angle specification of the Main screen.

You can set a value in the range of 0 to 100.

The set Zoom magnification is enabled only when Auto check is OFF. When the Auto check is ON, the Zoom magnification is decided automatically from the value of Height and Distance.

⑫Image Capture Type

You can select the method of capturing images from the camera.

JPEG: Images are captured as JPEG images.

H.264: Images are captured as an H.264 stream.

It is necessary to make the settings for the camera in accordance with the respective image acquisition method.

For details, refer to “Default Settings - Remote Camera Settings” in this manual.

⑬Auto Search button

When you click this button, the list of cameras present on the network is displayed.

When you select any one camera from the list and then close the window by clicking the OK button, values are entered automatically for some items.

⑭Operation after connection

Set the operation after connecting to the camera from the following.

Facing the front: After connection, the camera turns to the front.

Move to preset position: After connection, the camera moves to the selected preset position.

Do nothing: The camera keeps its position before connection.

⑮OK button

Used to apply the settings and return to the Camera screen.

⑩Cancel button

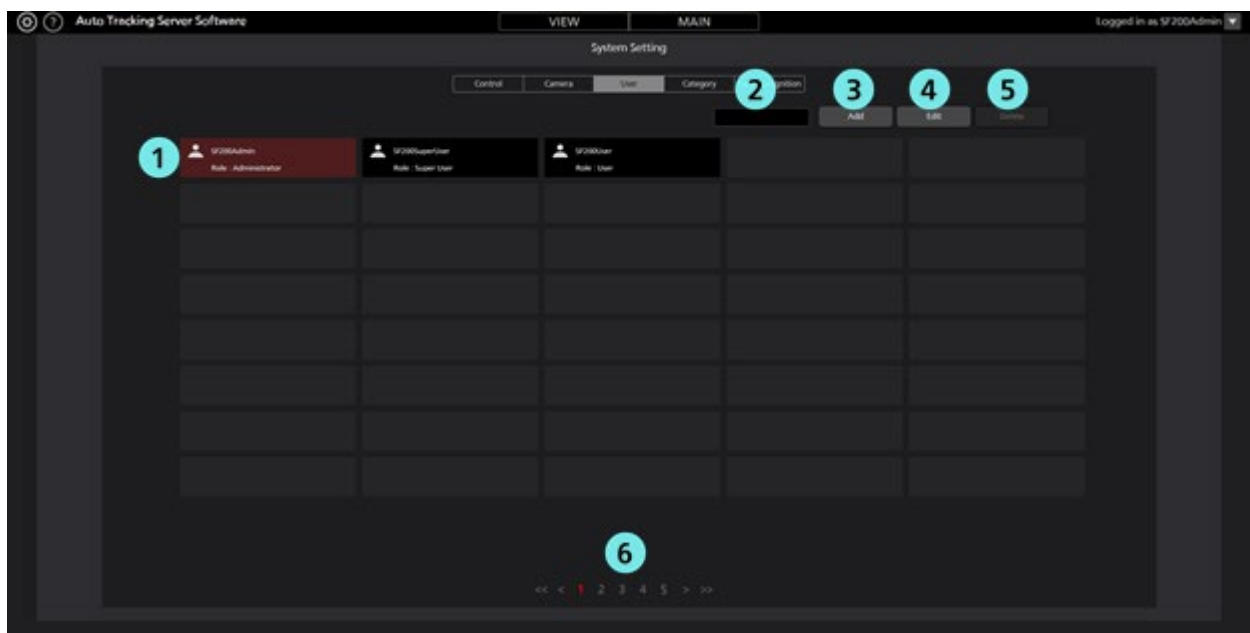
Used to cancel the settings and return to the Camera screen.

Settings – User Screen

This screen is used to make the account settings for the user using this software.

Click the Settings button at the top left of the screen, and then click the User tab at the center of the screen to move to this screen.

For details on the account settings, refer to “Default Settings - User Account Settings” in this manual.



①Account List Display

Displays the list of registered accounts.

The account name is displayed in the upper row of each account, and the authority is displayed in the lower row.

②Search box

Used when searching the account by account name.

If you enter a string, only the accounts that include the string in the account name are displayed in the list.

To return the display to the original display, clear the entered contents.

③Add button

Used to move to the Register Account screen.

④Edit button

Used to move to the Edit Account screen.

⑤Delete button

Used to delete the selected account.

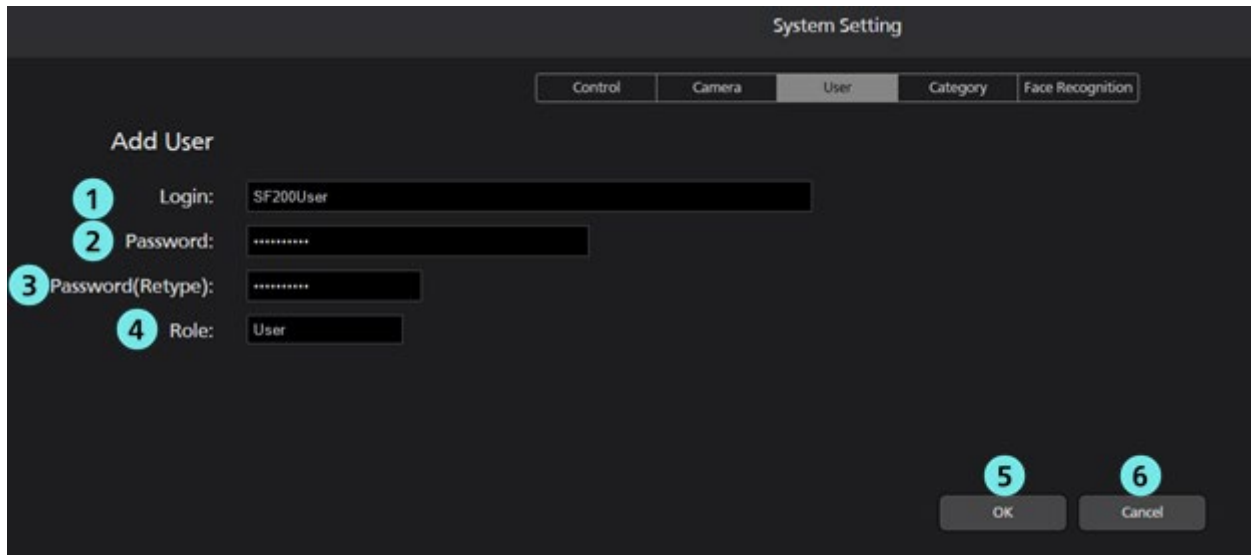
⑥Page selection button

Used to select the page to be displayed.

• Register/Edit Account screen

The display moves to this screen when you click the Add button/Edit button.

You can register a new account and edit already-registered account information.



The screenshot shows a 'System Setting' window with a dark background. At the top, there are five tabs: 'Control', 'Camera', 'User' (which is selected and highlighted), 'Category', and 'Face Recognition'. Below the tabs, the title 'Add User' is displayed. There are four input fields, each preceded by a circled number: 1. 'Login:' with the text 'SF200User' entered. 2. 'Password:' with a masked password '*****'. 3. 'Password(Retype):' with a masked password '*****'. 4. 'Role:' with the text 'User' entered. At the bottom right, there are two buttons: 'OK' (labeled with a circled 5) and 'Cancel' (labeled with a circled 6).

①Login

Enter the account name.

②Password

Enter the password.

③Password (Retype)

Re-enter the password for confirmation.

④Role

Set the account authority.

⑤OK button

Used to apply the settings and return to the User screen.

⑥Cancel button

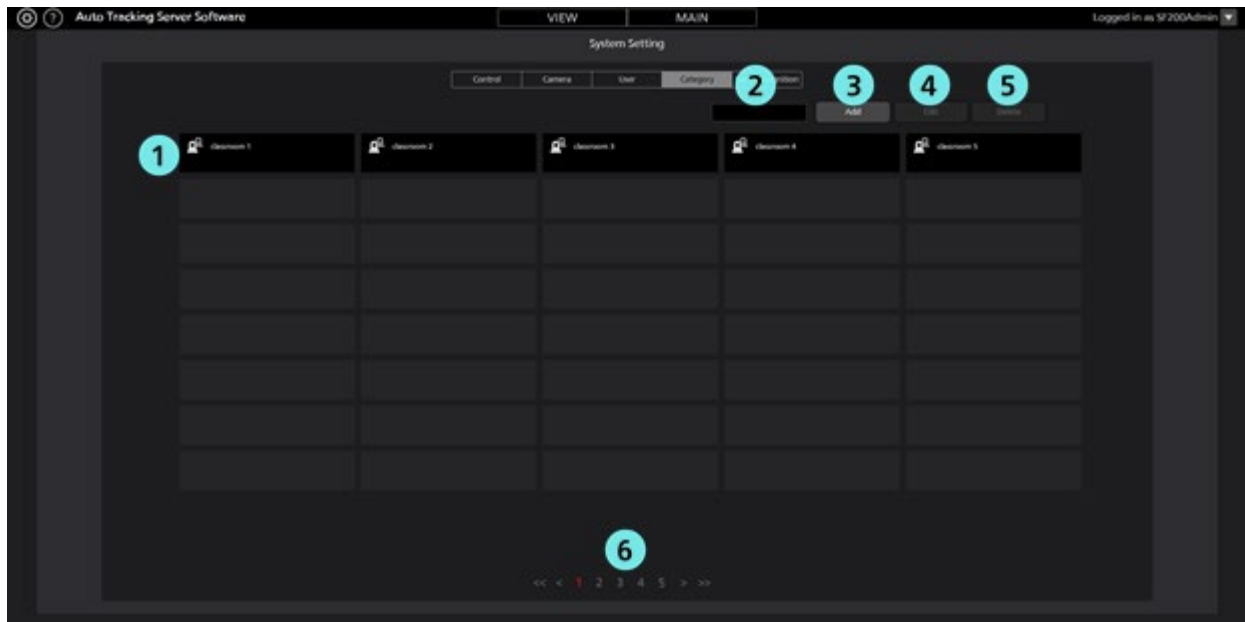
Used to cancel the settings and return to the User screen.

Settings – Category Screen

This screen is used to make the settings of the category (group) of the registered remote camera.

Click the Settings button at the top left of the screen, and then click the Category tab at the center of the screen to move to this screen.

For details on the category settings, refer to “Default Settings - Camera Category Settings” in this manual.



①Category list display

Displays the list of registered categories.

②Search box

Used when searching the category.

If you enter a string, only the categories that include the string in the name are displayed in the list.

To return the display to the original display, clear the entered contents.

③Add button

Used to move to the Register Category screen.

④Edit button

Used to move to the Edit Category screen.

⑤Delete button

Used to delete the selected category.

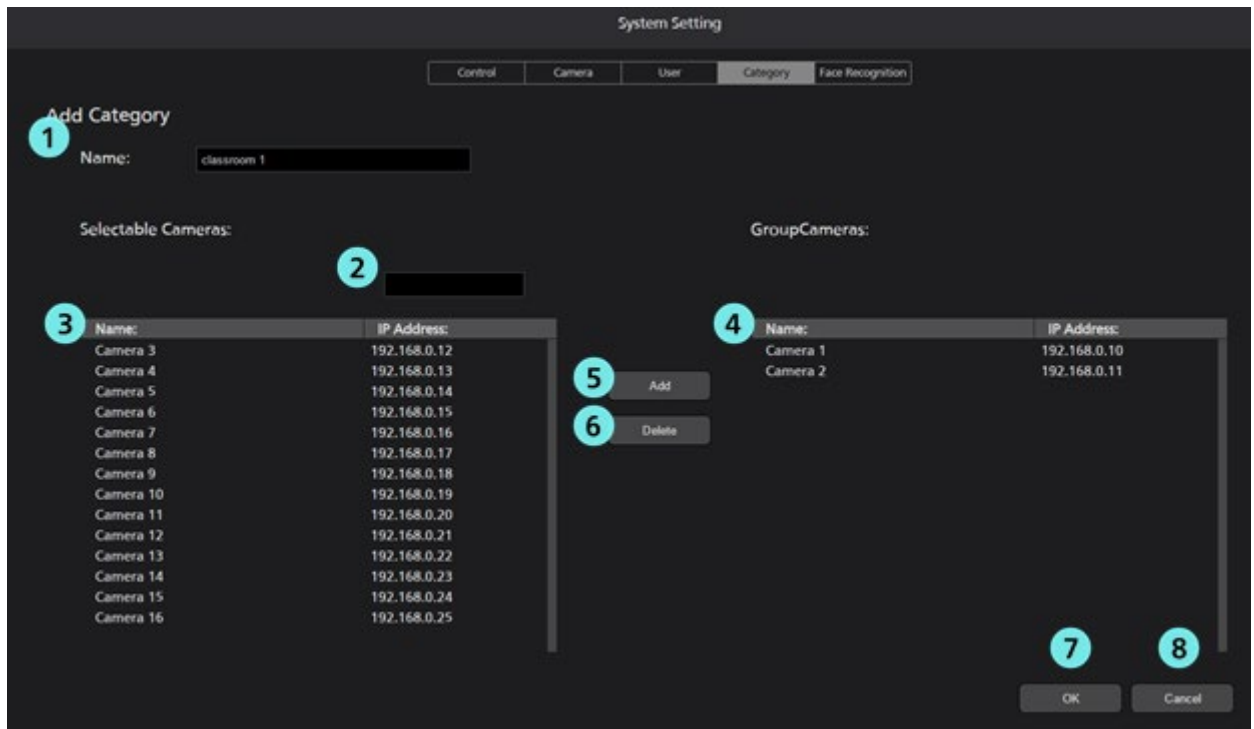
⑥Page selection button

Used to select the page to be displayed.

• Register/Edit Category screen

The display moves to this screen when you click the Add button/Edit button.

You can register a new category and edit an already-registered category.



①Name

Enter the category name.

②Search box

If you enter a string, only the cameras that include the string in the name are displayed in the camera list indicated in (3).

③List of cameras that do not belong to the category

A list of cameras that do not belong to the currently registered or edited category is displayed.

④List of cameras that belong to the category

A list of cameras that belong to the currently registered or edited category is displayed.

⑤Add button

If you select a camera in the list of cameras indicated in (3) and then click this button, the selected camera is added to the category.

⑥Delete button

If you select a camera in the list of cameras indicated in (4) and then click this button, the selected camera is deleted from the category.

⑦OK button

Used to apply the settings and return to the Category screen.

⑧Cancel button

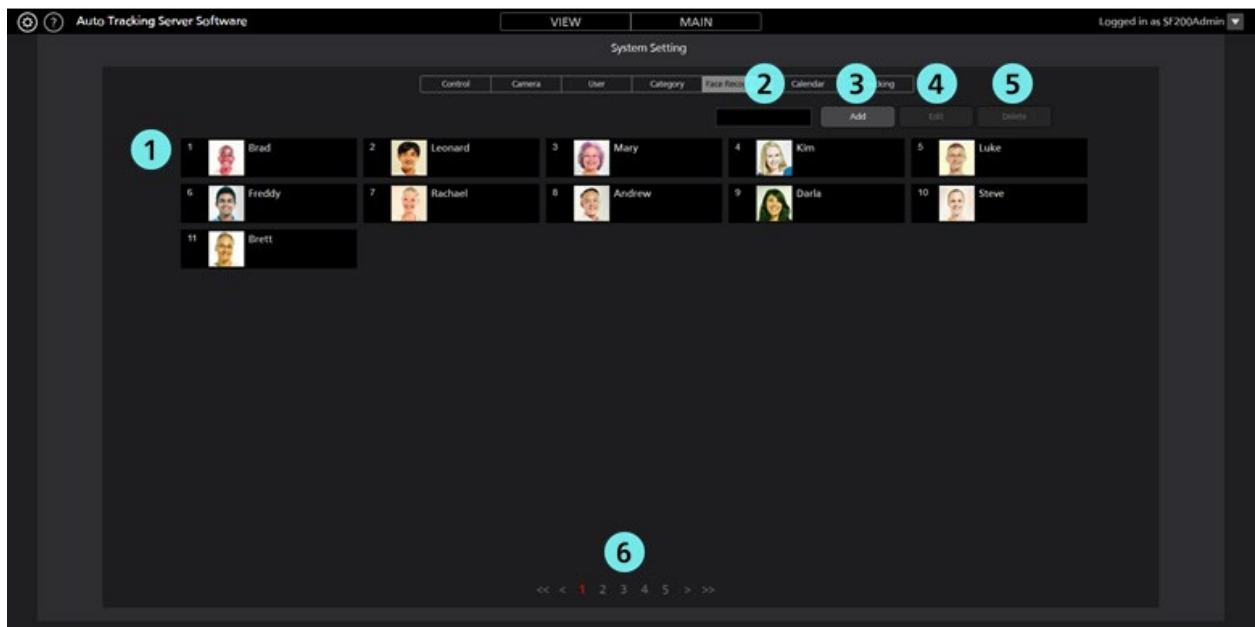
Used to cancel the settings and return to the Category screen.

Settings – Face Recognition Screen

This screen is used to make face data settings of the person, who is the tracking target.

Click the Settings button at the top left of the screen, and then click the Face Recognition tab at the center of the screen to move to this screen.

For details on the face data settings, refer to “Data Settings for Face Recognition” in this manual.



①Face data list display

Displays the list of registered face data.

②Search box

Used when searching the face data.

If you enter a string, only the face data that includes the string in the name is displayed in the list.

To return the display to the original display, clear the entered contents.

③Add button

Used to move to the Register Face Data screen.

④Edit button

Used to move to the Edit Face Data screen.

⑤Delete button

Used to delete the selected face data.

You cannot delete the face data that is set as the tracking target in any remote camera.

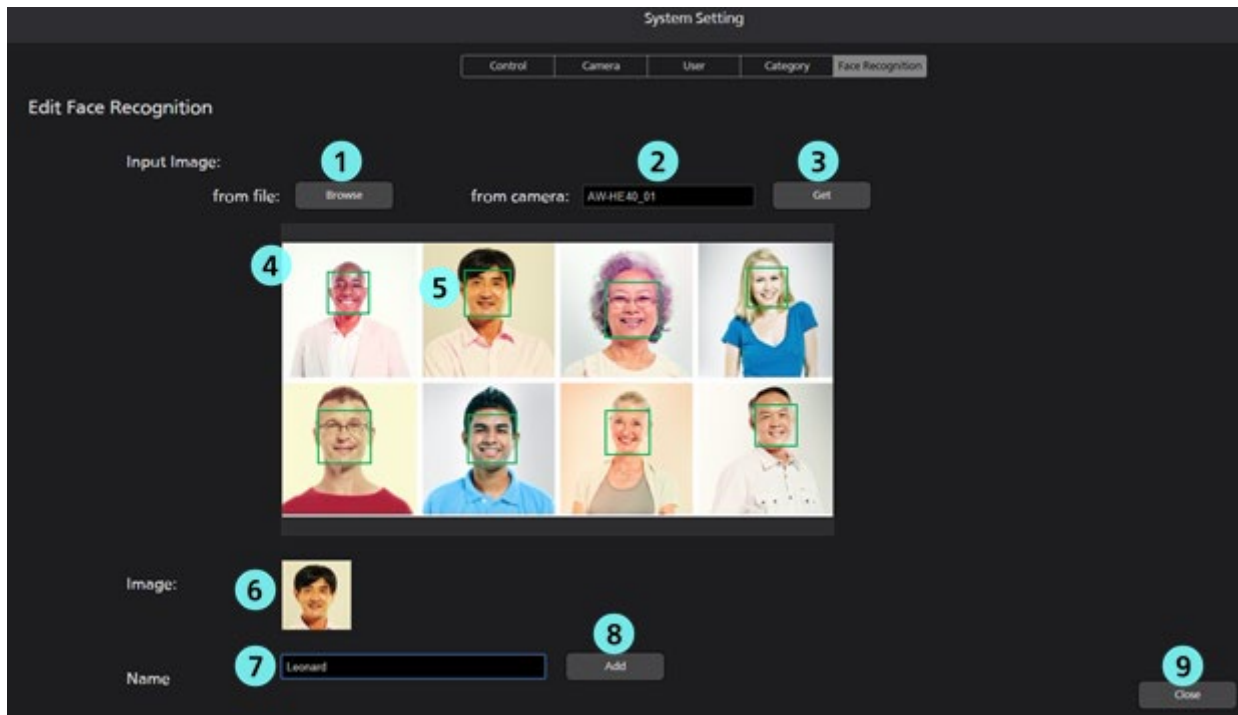
⑥Page selection button

Used to select the page to be displayed.

• Register/Edit Face Data screen

The display moves to this screen when you click the Add button/Edit button.

You can register new face data and edit already-registered face data.



①Browse button

If you click this button, a Select Image dialog box appears, and you can import an existing JPEG image.

②Camera selection box

Select the target camera for capturing the images. Only the connected cameras are displayed in the list.

③Get button

If you click this button, the images from the camera selected in the camera selection box are captured and imported.

④Image display area

The images imported through the operation of the Browse button or Get button are displayed.

⑤Face detection display frame

When a face is detected in an imported image, a frame appears around the face.

If you click the frame, the face is selected as the target.

⑥Face image display

The image of the selected face appears.

⑦Name input field

Enter the registered name of the selected face.

⑧Add button

If you click this button, the image and name of the selected face are registered.

⑨Close button

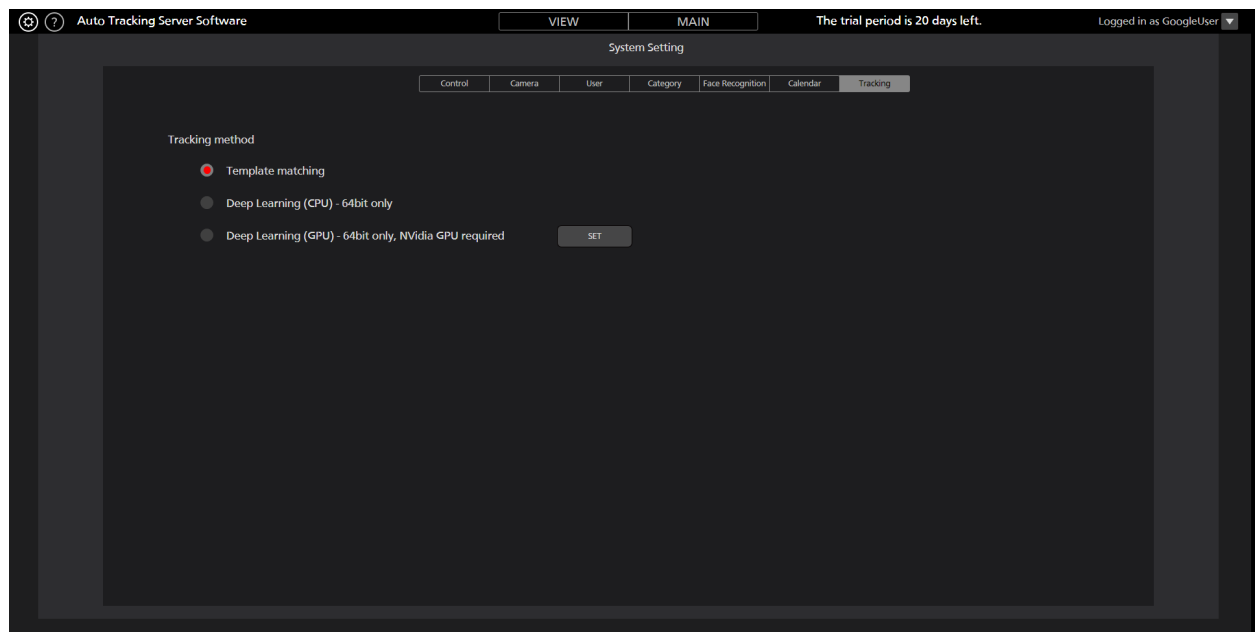
Click this button to return to the Face Recognition screen.

Settings - Tracking Screen

This screen is used to make the settings of the tracking method.

Click the Settings button at the top left of the screen, and then click the Tracking tab to move to this screen.

For details, refer to “Default Settings - Tracking Method Settings” in this manual.



Default Settings

Remote Camera Settings

Before using this software, make the settings in the remote camera.

The methods of capturing images from the remote camera include capturing images as JPEG images, and capturing images as an H.264 stream.

When capturing images as JPEG images, set “Image capture type” to JPEG at the time of registering the camera from Settings - Camera screen of this software.

When capturing images as an H.264 stream, set “Image capture type” to H.264 at the time of registering the camera from Settings - Camera screen of this software.

■ AW-UE100 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> JPEG(1):

Image capture size: 1280 x 720 or higher

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-UE150 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> JPEG(1):

Image capture size: 1280 x 720 or higher

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-HE130 settings

The tracking performance is higher when images are captured as an H.264 stream.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings for each item:

Initial display settings for “Live” page

Stream: JPEG(1)

Refresh interval (JPEG): During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

JPEG(1)

JPEG transmission: On

Image capture size: 1280 x 720

H.264(1)

H.264 transmission: Off

H.264(2)

H.264 transmission: Off

H.264(3)

H.264 transmission: Off

H.264(4)

H.264 transmission: Off

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

■ AW-UE70 / AW-HE42 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> JPEG(1):

Image capture size: When the Priority Mode is IP: 1280 x 720

When the Priority Mode is other than IP: 640 x 360

- This software cannot be used in USB mode.

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

Image quality: Normal

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-HE40 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> JPEG(1):

Image capture size: When the Priority Mode is IP: 1280 x 720

When the Priority Mode is other than IP: 640 x 360

- This software cannot be used in USB mode.

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

Image quality: Normal

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-UE4 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, set Setup-> Basic-> Priority mode to IP.

Make the following settings from Setup -> Image/Audio -> JPEG

Image capture size: 1280 x 720

Frame rate: During NTSC: 10, During PAL: 10

- When images are captured as an H.264 stream

On the Web screen of the camera, set Setup-> Basic-> Priority mode to IP.

Make the following settings from Setup -> Image/Audio -> H.264/H.265

Stream transmission: On

Codec: H.264

Image capture size: 1280 x 720

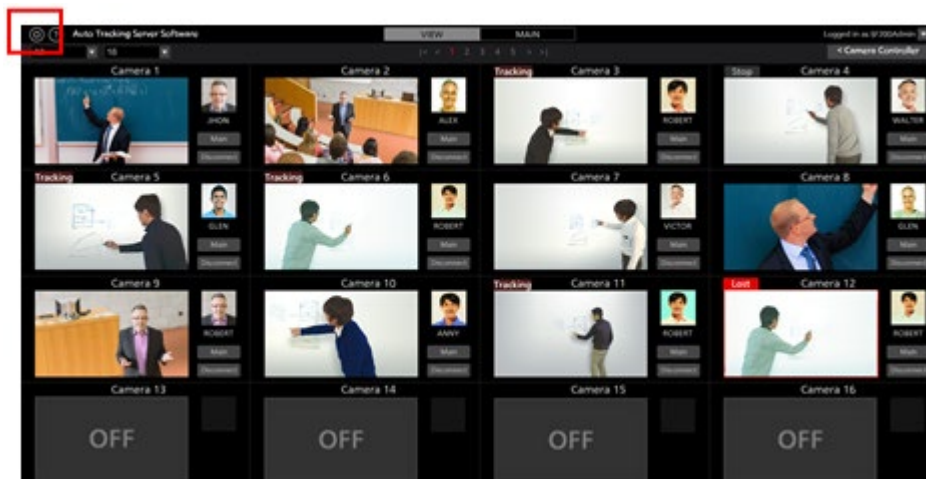
Frame rate: During NTSC: 15, During PAL: 10

Server Installation Settings

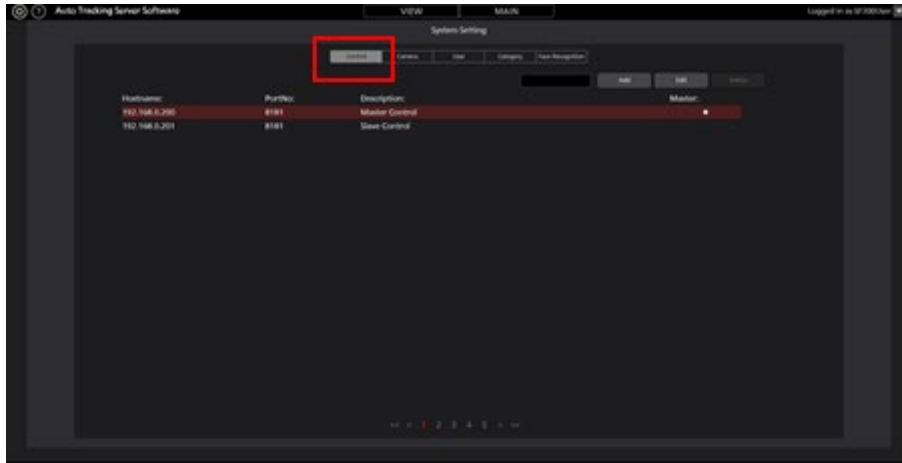
When configuring this software by multiple servers, make the server installation settings during the initial startup.

This setting is not required when configuring the software by a single server.

1. Log in to this software.
2. The View screen appears. Click the Settings button at the top left of the screen.



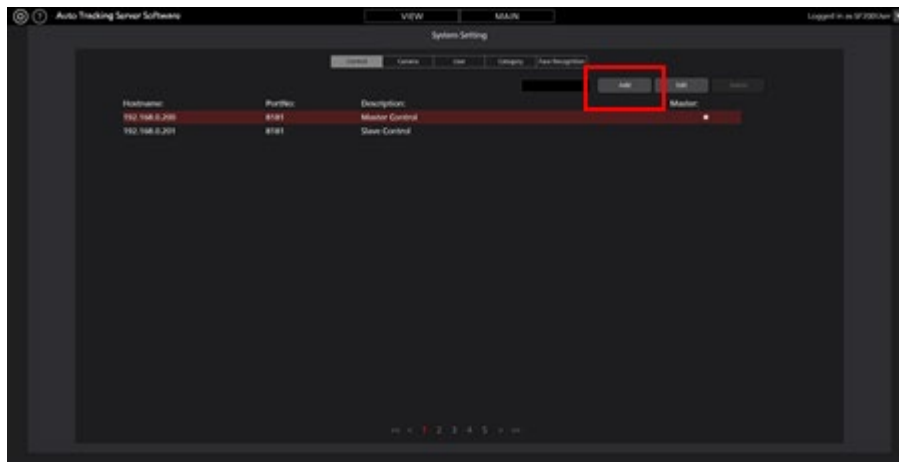
3. Click the Control tab in the center of the Settings screen.



4. Register the Sub servers.

Perform the registration task described below as many times as the number of Sub servers.

(1) Click the Add button to move to the Register Server screen.



(2) Make an entry in the following items.

Hostname: IP address of the Sub server

PortNo: Port number used by the Sub server (the default value is 8190)

Description: Description of the Sub server

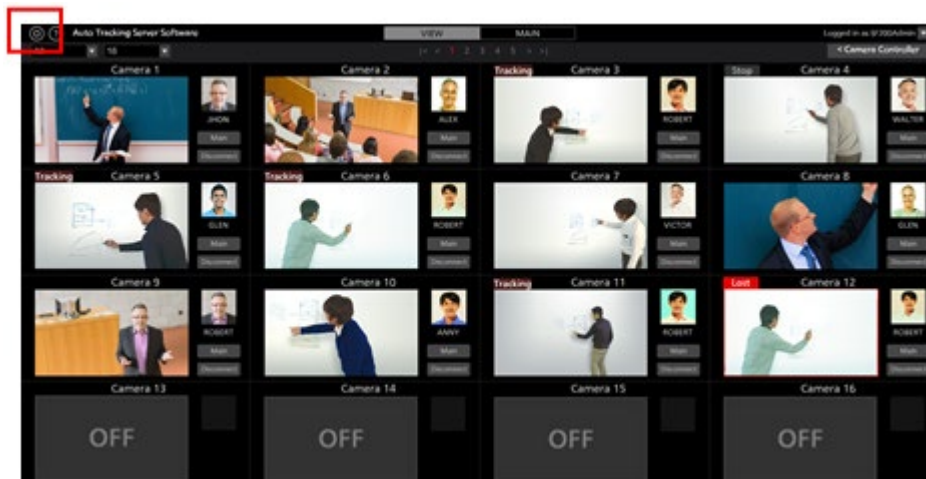
The screenshot shows the 'Add Control' dialog box. It has a title bar 'System Setting' and a tabbed interface with 'Control', 'Camera', 'User', 'Category', and 'Face Recognition'. The 'Control' tab is selected. The dialog contains three input fields: 'Hostname' (with the value '192.168.0.201'), 'PortNo' (with the value '8181'), and 'Description' (with the value 'Slave Server'). At the bottom right, there are 'OK' and 'Cancel' buttons.

(3) Click the OK button to complete registration.

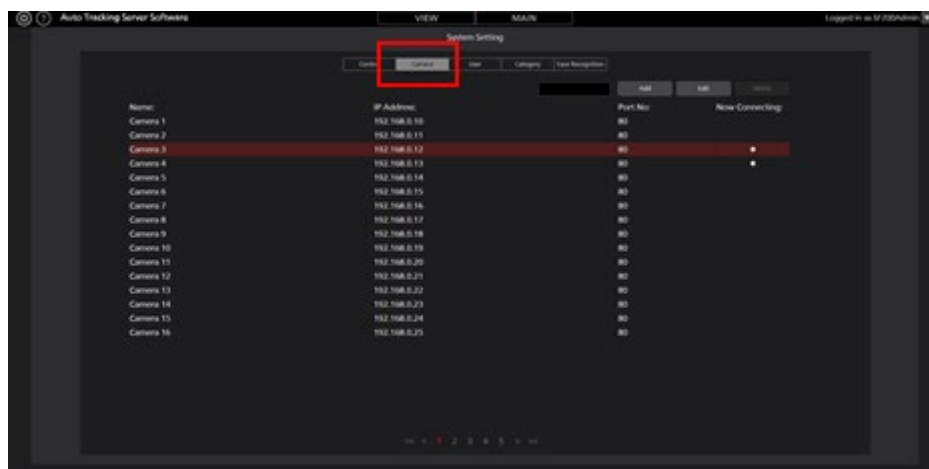
Remote Camera Installation Settings

During initial startup of this software, make the installation settings of the remote camera.

1. Log in to this software.
2. The View screen appears. Click the Settings button at the top left of the screen.



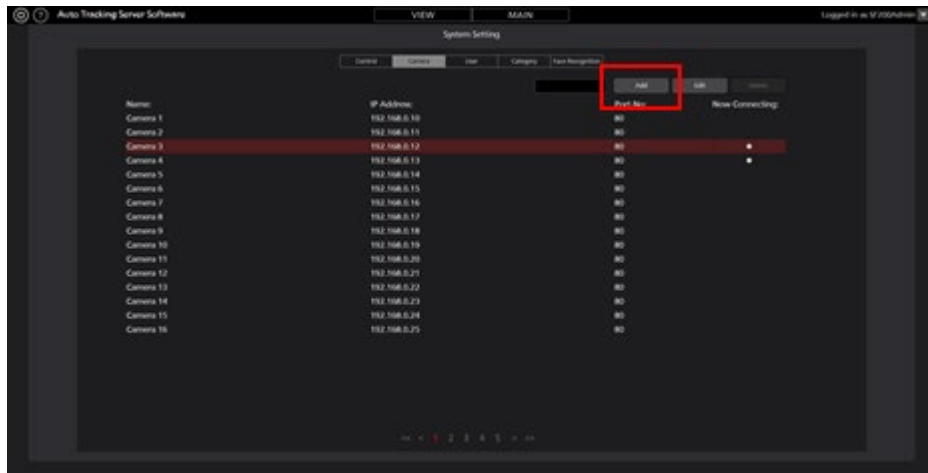
3. Click the Camera tab in the center of the Settings screen.



4. Make the settings of the camera.

Perform the registration task described below as many times as the number of cameras.

- (1) Click the Add button to move to the Register Camera screen.



(2) Make an entry in the following items.

You can make an entry in the items either manually, or automatically by searching the camera.

Name: Name of the camera

IP Address: IP address of the camera

PortNo: Port number used by the camera (the default value is 80)

Login: Camera account

Password: Camera password

Height: Camera installation height

Distance: Camera installation distance

The 'Add Camera' dialog box is shown, featuring an 'Auto Search' button and several input fields. The fields are labeled: Name, IP Address, Port No, Login, Password, Height, Distance, Max Zoom, Angle Zoom(Upper Body), Angle Zoom(Full Body), and Angle Zoom(Full). The 'Distance' field has a dropdown menu with 'cm' and 'feet' options. The 'Max Zoom' field has a percentage sign. The 'Angle Zoom' fields have percentage signs and 'Auto' checkboxes. The 'OK' and 'Cancel' buttons are at the bottom right.

- When an entry is made manually

Move to the box of each item and enter the value.

- When an entry is made automatically

When you click the Auto Search button, the list of cameras present on the network is displayed.

When you select any one camera from the list and then close the window by clicking the OK button, values are entered automatically for some items.



A screenshot of a camera registration window. The window has a dark background and contains a table with the following data:

No:	Client Mac:	IP Address:	Port No:	Camera Name:	Camera Model:
1	20-C6-E8-E7-02-43	10.194.151.12	80	AIWHE70	CAM3HE70
2	08-00-23-66-02-21	192.168.0.99	80		SIN311L
3	00-80-45-2F-24-80	10.194.151.31	80		CAM3EA10

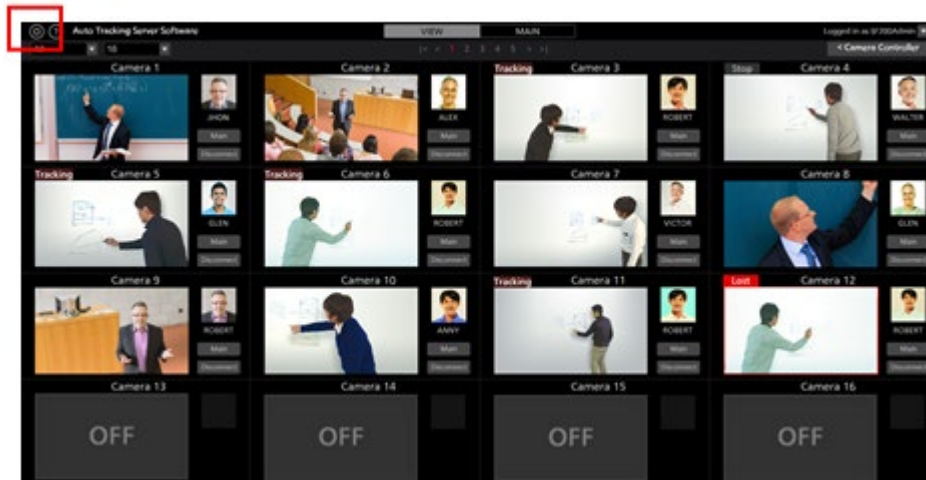
At the bottom right of the window is an "OK" button.

(3) Click the OK button to complete registration.

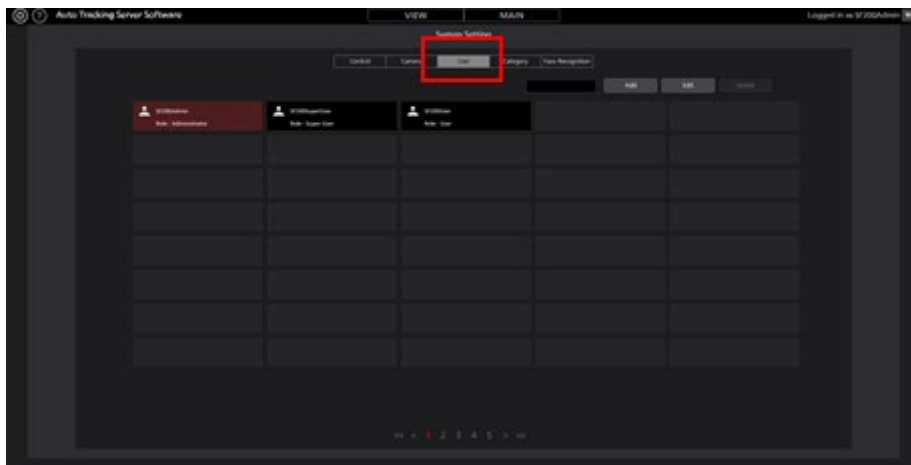
User Account Settings

During initial startup of this software, make the settings of the user account using this software.

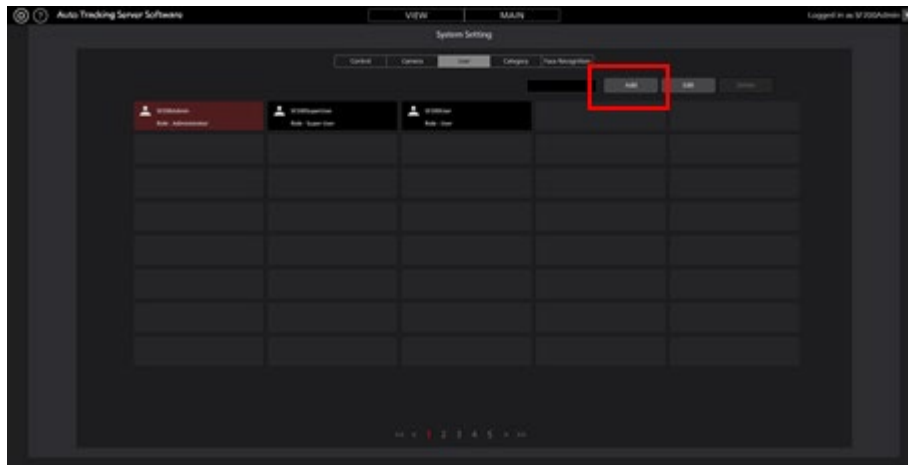
1. Log in to this software.
2. The View screen appears. Click the Settings button at the top left of the screen.



3. Click the User tab in the center of the Settings screen.



4. Make the settings of the user account.
Perform the registration task described below only as many times as the number of required users.
(1) Click the Add button to move to the Register User screen.



(2) Make an entry in the following items.

Login: User account name

Password: Password

Password (Retype): Password (for confirmation)

Role: Account authority You can select the role from the following three types:

Administrator: All functions can be used

Super User: Server settings (Control screen) cannot be used

User: The following features are not available

Server settings (Control screen)

Account management (User screen)

Camera settings (Camera screen)

Category settings (Category screen)

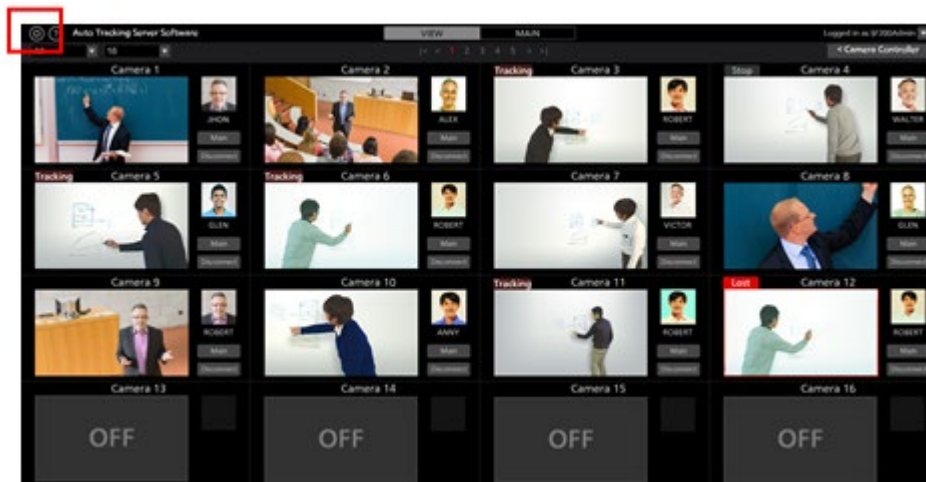
When User is selected in Role, you can set the camera categories that can be accessed.

(3) Click the OK button to complete registration.

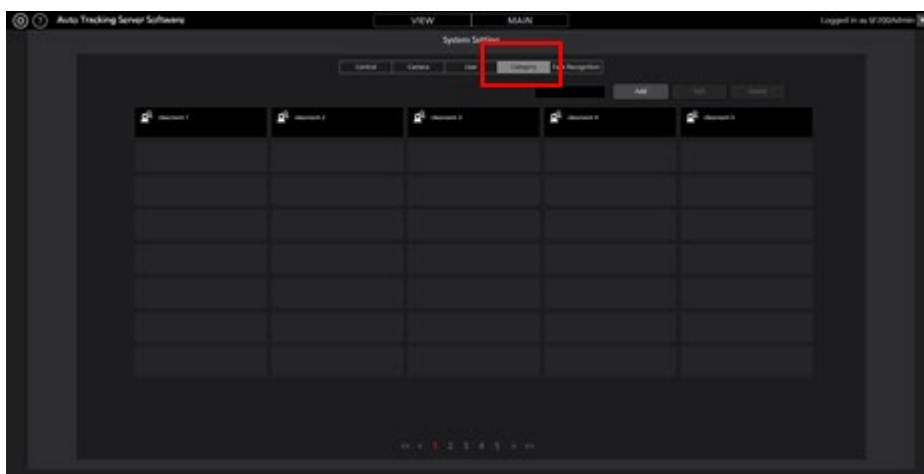
Camera Category Settings

If necessary, make the settings for the camera category (camera group).

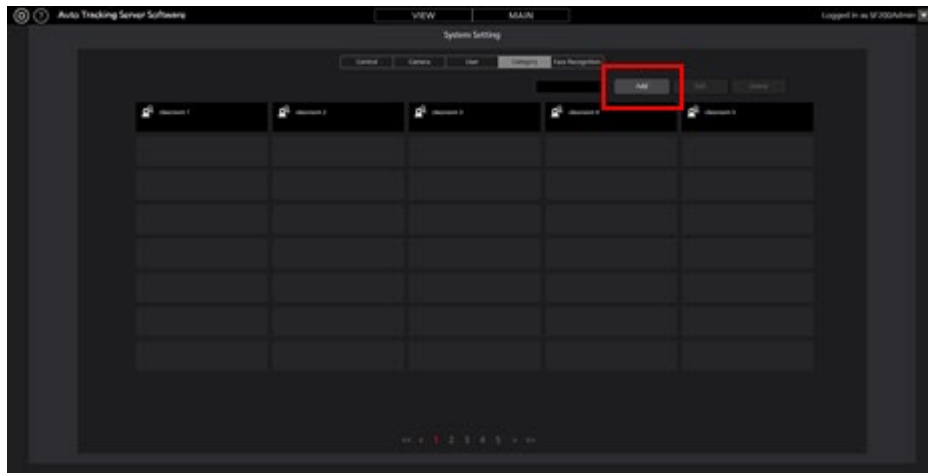
1. Log in to this software.
2. The View screen appears. Click the Settings button at the top left of the screen.



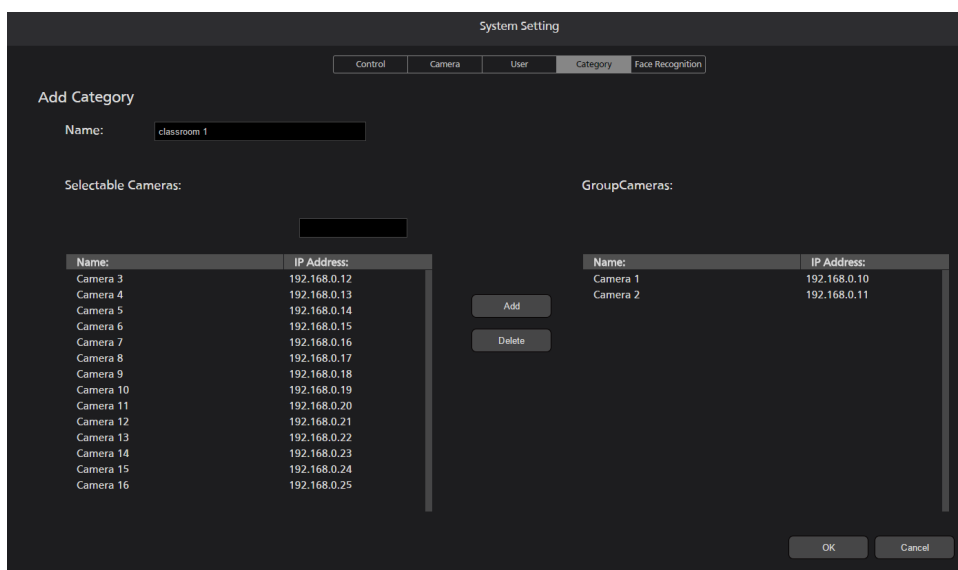
3. Click the Category tab in the center of the Settings screen.



4. Make the settings for the category.
Perform the registration task described below only as many times as the number of required categories.
(1) Click the Add button to move to the Register Category screen.



- (2) Enter the name of the category to be registered in Name.
- (3) If you select a camera to be registered in the category from the camera list on the left, and then click the Add button, the camera is added to the category.

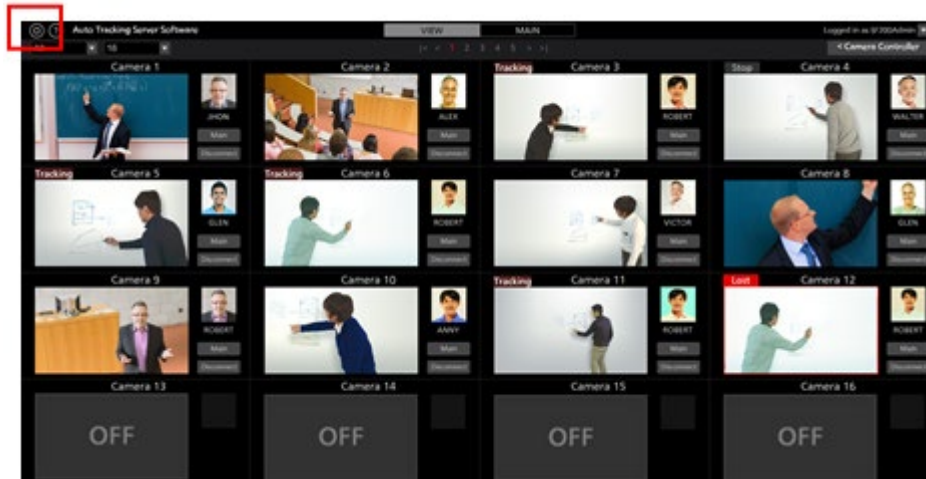


- (4) Click the OK button to complete registration.

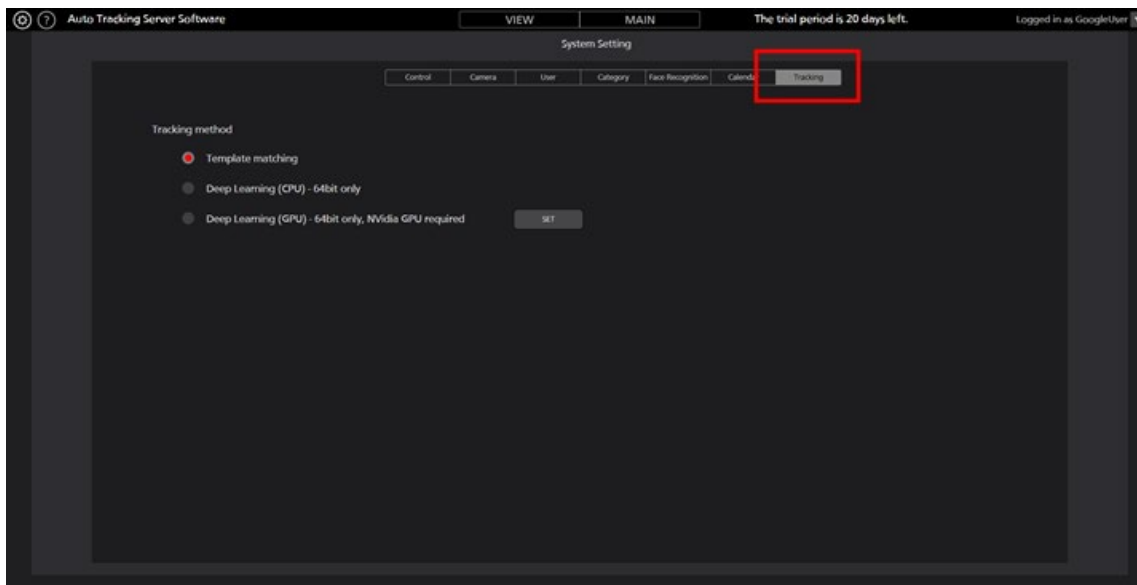
Tracking Method Settings

You can set the tracking method to be used in this software.

1. Click the Settings button at the top left of the screen.



2. Click the Tracking tab on the Settings screen.



3. Under “Tracking method”, select the tracking method to use.

Template matching: This is the regular detection method with a low CPU load.

Deep Learning (CPU): This is a method of human body detection by deep learning using the CPU.

Although the CPU load is higher as compared to Template matching, more accurate detection can be performed.

Deep Learning (GPU): This is a method of human body detection by deep learning using the GPU.

Since the GPU is used, faster detection can be performed at a CPU load lesser than when the CPU is used.

<Note>

• To use the Deep Learning (GPU) method, it is necessary for the PC environment to satisfy the following conditions:

- A NVIDIA GPU board must be provided in the PC.

The supported GPU boards are as follows:

Pascal architecture

NVIDIA GeForce GTX 1080 or later

NVIDIA Quadro P4000 or later

Turing architecture

NVIDIA GeForce RTX 2080/2080Ti

NVIDIA Quadro RTX 4000 or later

- Both the OS and this software must be 64-bit versions.

When using a GPU with Turing architecture, please use Windows 10 or Windows Server 2016 for the operating system.

- NVIDIA CUDA Toolkit must be installed in the PC.

When using a GPU with Pascal architecture, please install CUDA Toolkit 8.0 referring to the following procedure.

https://www.pass.panasonic.co.jp/pro-av/support/content/download/DEF/soft/man/CUDA_Toolkit_8.0_InstallationProcedures_jpn.pdf

When using a GPU with Turing architecture, please install CUDA Toolkit 10.1 referring to the following procedure.

https://www.pass.panasonic.co.jp/pro-av/support/content/download/DEF/soft/man/CUDA_Toolkit_10.1_InstallationProcedures_jpn.pdf

Data Settings for Face Recognition

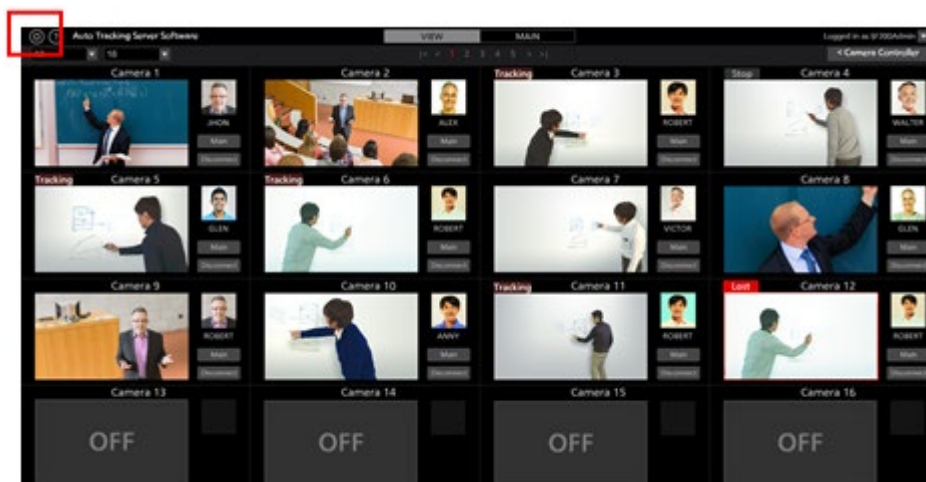
Registering the Face Data

Since this software enables tracking by detecting the face of a specified person with the help of the face recognition function, a stable tracking operation is implemented.

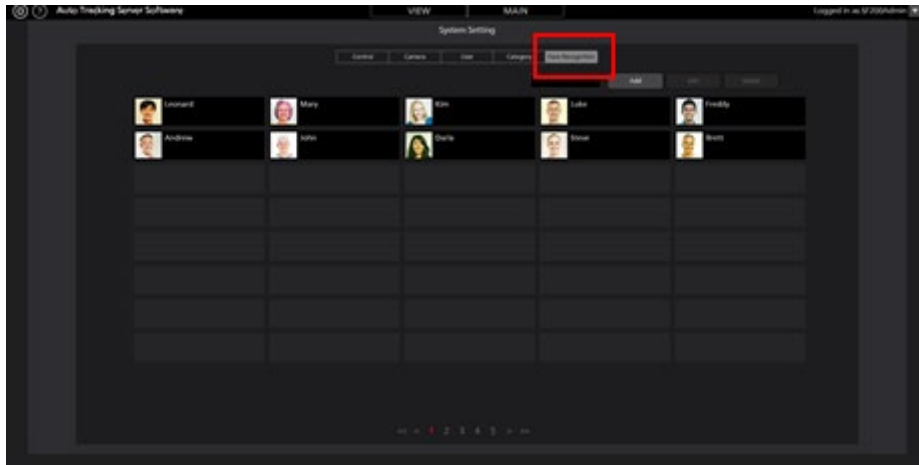
You can register beforehand the face data that is used as a recognition source of the person to be tracked. There are two methods of registering the face data, namely a method of using an existing JPEG image, and a method of using an image captured from camera images.

Register the face data according to the procedure described below.

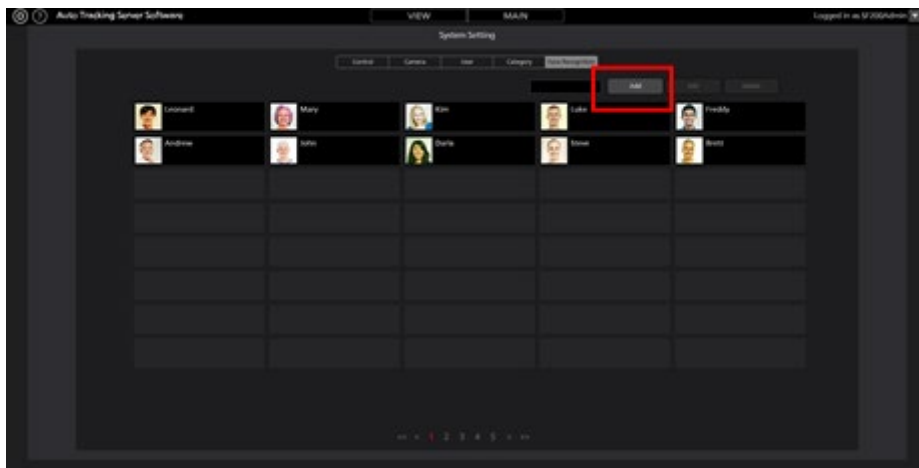
1. Log in to this software.
2. The View screen appears. Click the Settings button at the top left of the screen.



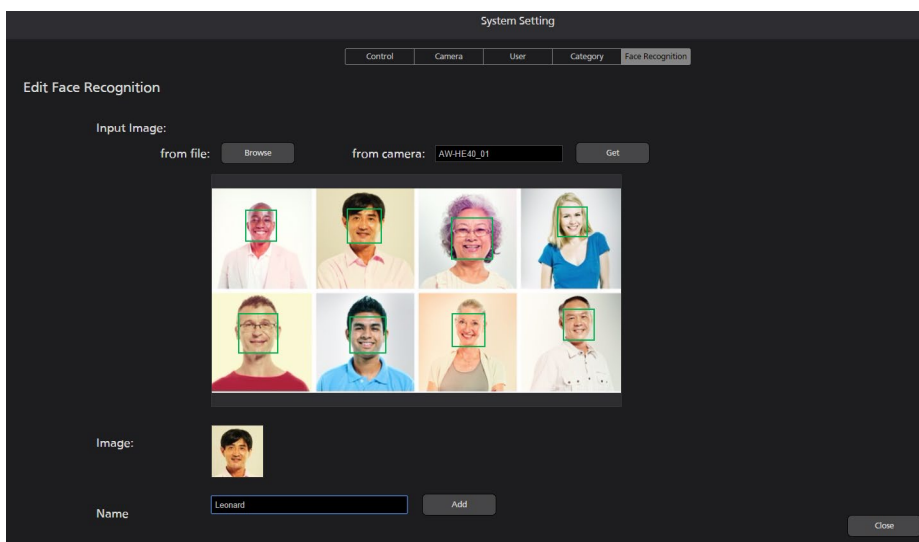
3. To capture from the camera images, click the Connect button of the camera to use to set the camera to the connected state.
4. Click the Face Recognition tab in the center of the Settings screen.



5. Click the Add button at the top right of the screen.



6. The Register Face Data screen appears.



7. Import the face data according to the procedure described below.

- When using an existing JPEG file:

If you click the Browse button for the “from file:” field, a dialog box for selecting the image file appears. Select the JPEG image showing the face.

- When capturing from the camera images:

Select the camera to use in the box for the “from camera:” field, and then click the Get button to perform capturing.

8. The image is displayed in the center of the Register Face Data screen. If a face is detected in the image, a frame appears around the face.

If a frame does not appear, repeat step 7.

9. Click the frame of the face you want to register. The face image appears in the “Image:” field.

10. Enter the name of the face data in the “Name:” field.

11. If you click the Add button, the new face data that has been selected is registered.

<Notes>

- If several faces are detected in the image, you can collectively register several face data instances by repeating steps 9 to 11 described above.
- Up to 10 faces can be detected in one image.

Editing the Face Data

You can change the photograph and name in the already registered face data.

There are two methods of editing the face data, namely a method of using the existing JPEG image, and a method of using the image captured from camera images.

Edit the face data according to the procedure described below.

1. Perform the same operation as in steps 1 to 4 of “Registering the Face Data” to display the Face Recognition screen.
2. After selecting the face data to be registered by clicking its number part, click the Edit button at the top right of the screen.
3. If you perform the same operation as in steps 6 to 11 of “Registering the Face Data”, the face data changes.

Deleting the Face Data

Delete the registered face data according to the procedure described below.

1. Perform the same operation as in steps 1 to 4 of “Registering the Face Data” to display the Face Recognition screen.
2. After selecting the face data to be deleted by clicking its number part, click the Delete button at the top right of the screen.
3. A window for confirmation of data deletion appears. If you click the Yes button, the face data is deleted.

<Notes>

- If the selected face data is being used by some camera, the Delete button is disabled, and you will not be able to delete the face data. To delete face data, make sure it is not in use by any camera.

If a camera is using face data that is to be deleted, the name of the camera is displayed as "Used by Camera 01" or something similar, when you place the mouse cursor on the face data.

Sorting the Face Data

You can sort the display order of the registered face data.

The display order of the face data affects the priority order of detection when tracking is performed with the Auto Face Search set to ON (when the tracking target is detected from among all persons for whom the face data is registered). The smaller the ID, the higher the priority order of detection.

1. Perform the same operation as in steps 1 to 3 of "Registering the Face Data" to display the Face Recognition screen.
2. Click the photograph of the face from the face data you want to sort, and drag it.
3. If the dragged face data is dropped to the location of another face data, the face data moves to the dropped location.

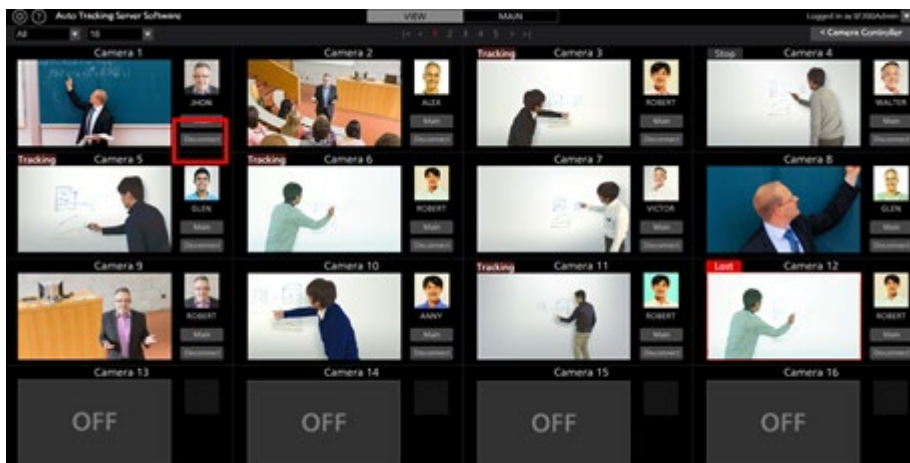
Explanation of the Tracking Operation

Connecting to or Disconnecting from the Remote Camera

When performing the tracking process, you must connect to the remote camera, and when ending the tracking process, you must disconnect from the remote camera.

- Connection procedure

1. On the View screen or Main screen, click the Connect button of the camera to be connected.



2. If the connection is established properly, the Connect button changes to the Disconnect button.

- Disconnection procedure

1. On the View screen or Main screen, click the Disconnect button of the camera to be disconnected.

Upper Limit of the Number of Cameras that can be Connected

This software can be connected to multiple remote cameras to perform the tracking operation in each camera, but the number of cameras that can be connected is restricted.

The upper limit of the number of cameras that can be connected is the smaller value of the below-described A and B.

A: Restriction based on the number of servers

The upper limit is the number of servers configuring this software x 4.

B: Restriction based on the license

The number of cameras described below is the upper limit.

During the trial use period: 16

When activation has been completed: Number of cameras in accordance with the activated license

When an attempt is made to connect more cameras than the upper limit, an error message is displayed. Click the Disconnect button of the connected cameras to disconnect the connection.

<Notes>

- The license usage status is displayed as “License (used/total)” at the top of the View screen or Main screen.

Starting the Tracking Process

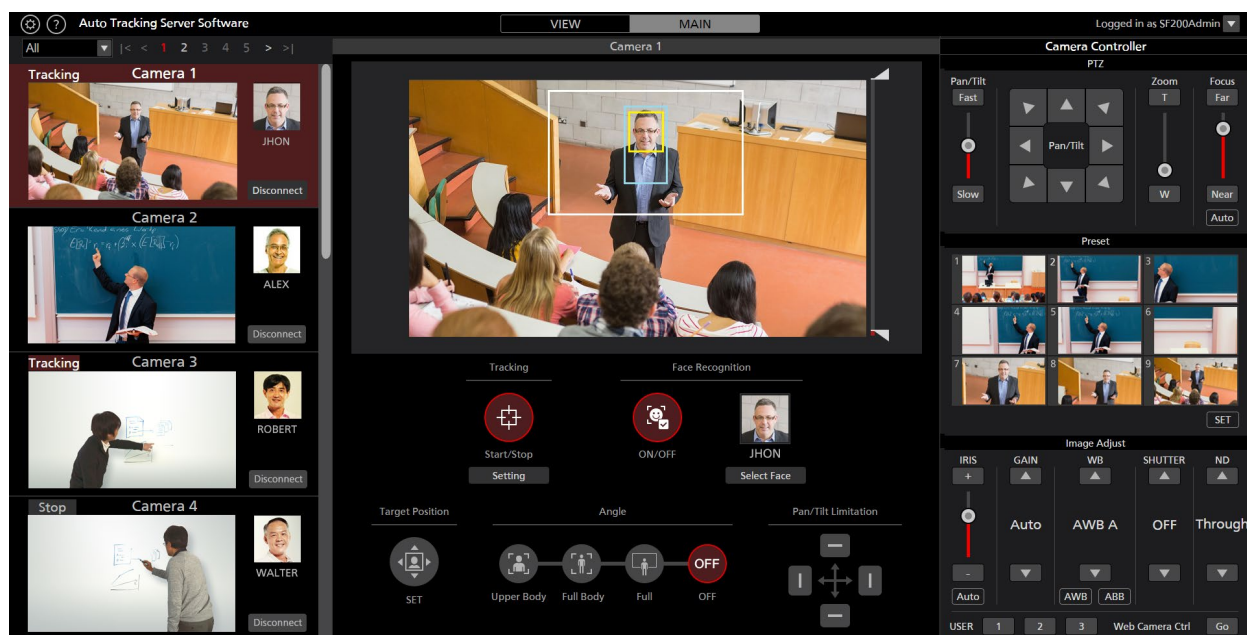
- When tracking is started automatically

Tracking can be started by detecting the tracking target automatically.

The functions described below have been prepared as functions for automatic detection, and you can set whether or not to use each function.

- Detecting the face of the specified person by the face recognition function

Make the settings according to the procedure described below.



1. On the View screen or Main screen, click the Connect button of the camera for which the tracking process is to be performed to establish a connection with it.
2. The Main screen appears.
3. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.
4. To detect the face of the person set by the face recognition function, set the face recognition function according to the procedure below.

- When a specific person is the target

- ① Click the Select Face button to view the Select Face screen.
- ② On the Select Face screen, select the face data of the person to be set as the tracking target, and then click the OK button to close the Select Face screen.
- ③ Set the Face Recognition ON/OFF button to ON.
- ④ If the face of the tracking target is detected in the camera image, the tracking process is started.

- When the tracking target is to be detected from all persons for whom the face data is registered.

- ① Select the Auto Face Search checkbox.
- ② Set the Face Recognition ON/OFF button to ON.

- ③ If any person for whom the face data has been registered is detected in the camera image, the tracking process is started. The smaller the face data ID on the Settings - Face Recognition screen, the higher the priority order of detection.

5. If you set the Tracking Start/Stop button to ON, the Pan/Tilt operation of the remote camera is enabled, and the tracking operation starts.

<Notes>

- If in the Tracking Setting window displayed by the Setting button in the Tracking field, the check mark for Auto Tracking Start is ON, the Pan/Tilt operation of the remote camera is enabled at the same time when the tracking target is detected.
- The face data setting of the face recognition function is stored for each camera.
- When the remote camera is AW-UE4, tracking is performed by changing the position of the zoomed image. The orientation of the camera itself does not change.

• **When tracking is started manually**

To start tracking by selecting the tracking target manually, follow the procedure described below.

1. On the View screen or Main screen, click the Connect button of the camera for which the tracking process is to be performed to establish a connection with it.
2. The Main screen appears.
3. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.
4. If face data for face recognition has been selected, click the Select Face button to display the Select Face screen, and cancel the selection of the face data.
5. If you left-click the location to be tracked in a camera image, the tracking process starts by assuming the object at that location to be the tracking target.
6. If you set the Tracking Start/Stop button to ON, the Pan/Tilt operation of the remote camera is enabled, and the tracking operation starts.

<Notes>

- If the face of a person is detected at the location that was left-clicked in step 4, the corresponding face data is automatically set as the recognition source of face recognition. This face data is not stored. To cancel the set face data, select the Auto Face Search checkbox, and then deselect the Auto Face Search checkbox.
- When a person's face is detected in a camera image and you double click the face, sets the face data as the recognition basis for face recognition. This face data is not stored. To cancel the set face data, select the Auto Face Search checkbox, and then deselect the Auto Face Search checkbox.
- If in the Tracking Setting window displayed by the Setting button in the Tracking field, the check mark for Auto Tracking Start is ON, the Pan/Tilt operation of the remote camera is enabled at the same time when the tracking target is detected.
- When the remote camera is AW-UE4, tracking is performed by changing the position of the zoomed image. The orientation of the camera itself does not change.

Discontinuing the Tracking Process

To discontinue the tracking process, perform the operation described below:

1. If the Face Recognition ON/OFF button is in the ON state (red color), click the Face Recognition ON/OFF button to set it to the OFF state (gray color).
2. Set the Tracking Start/Stop button to the OFF state (gray).
3. The tracking process will be discontinued.

Changing the Tracking Target

To change the tracking target during the tracking operation, perform the operation described below.

- When the face recognition function is used
 1. Click the Select Face button to display the Select Face screen.
 2. On the Select Face screen, select the face data of the person to be set as the new tracking target, and then click the OK button to close the Select Face screen.
 3. Set the Face Recognition ON/OFF button to ON.
 4. If the face of the person set as the new tracking target is detected in a camera image, the tracking process is started.

<Notes>

- When a person's face is detected in a camera image and you double click the face, sets the face data as the recognition basis for face recognition. This face data is not stored. To cancel the set face data, select the Auto Face Search checkbox, and then deselect the Auto Face Search checkbox.
- When the face recognition function is not used

Left-click the camera image.

Processing is started with the object at the left-clicked location as the new tracking target.

Changing the Display Position of the Tracking Target

The display position of the tracking target is displayed as a white cross on the Main screen.

In the initial state, the tracking target is displayed in the center of the camera image.

To change the display position of the tracking target, perform the operation described below.

1. The Main screen appears.
2. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.
3. Set the Target Position Set button to the ON state (red color).
4. Left-click the camera image to set the display position.

<Notes>

- You cannot set the display position at the outer periphery of the camera image.

Setting the Zoom Magnification during Tracking

You can set the zoom magnification during tracking according to the procedure described below:



1. The Main screen appears.
2. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.

3. To manually set the Zoom magnification, make the settings with the Zoom position control slider/button of the camera controller.
4. To set to a predetermined Zoom magnification, click any of the Upper Body / Full Body / Full buttons under Angle. The Zoom magnification will change according to the selected item.

<Notes>

- If the Zoom magnification is changed significantly in a short period of time, the tracking target may be lost.
- If zooming is performed in the magnification direction in a state when the display position of the tracking target is other than the center of the screen, the tracking target may be lost.
- If any one of Upper Body / Full Body / Full is selected under Angle, the Zoom magnification will change automatically according to the selected item when the tracking target is detected. If you do not want to change the Zoom magnification, set the Angle to OFF.
- This function cannot be used when the remote camera is AW-UE4.

Tracking Target Detection Mask Area Setting

You can set the mask area (the area that is not used during detection within the camera images) when detecting the tracking target.

Make the settings according to the procedure described below.

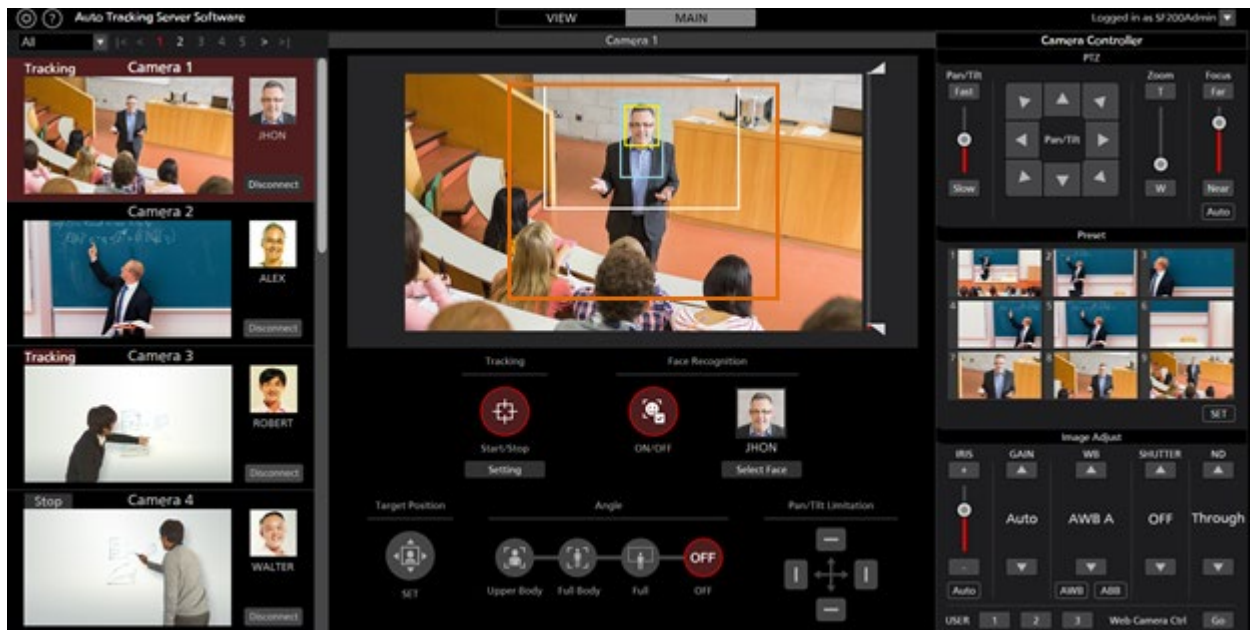


1. The Main screen appears.
2. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.
3. Operate the knob of the slider on the right side of the camera image to set the mask area at the top and bottom of the screen. The setting is reflected immediately.

Setting an Area in which the Tracking Operation of the Camera is Not to be Performed

In a camera image, you can set an area in which the tracking operation of the camera is not to be performed when the tracking target moves.

Make the settings according to the procedure described below.



1. The Main screen appears.

2. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.

3. When you right-click the mouse on a camera image and then drag it, the region is displayed by a yellow line.

The setting is complete once the dragging operation of the mouse is complete.

(A value is set in the Tracking Disable Area of the Tracking Setting window displayed by clicking the Setting button in the Tracking field.)

4. When canceling the area specification, right-click outside the range of the camera image.

(The value set in the Tracking Disable Area of the Tracking Setting window displayed by clicking the Setting button in the Tracking field is cleared.)

Setting the Pan/Tilt Limitation of the Camera

You can set the Pan/Tilt limitation of the remote camera.



1. The Main screen appears.
2. Select the camera for which operations are to be performed from the camera list display on the left end of the screen.
3. Set the limitation in each of the top, bottom, left, and right directions using the respective button of the Pan/Tilt Limitation item.

When the button is changed from the OFF (gray color) state to the ON (red color) state:

The position of the camera when it is turned ON is set as the limit of the working range of the camera in that direction.

When the button is changed from the ON (red color) state to the OFF (gray color) state:

The setting of the limitation in the direction in which the camera is turned OFF is canceled.

<Notes>

- This function cannot be used when the remote camera is AW-UE4.

Operations of the Camera Controller

About the Camera Controller

The camera controller can be used to perform various operations of the remote camera.

The supported operations are as described below.

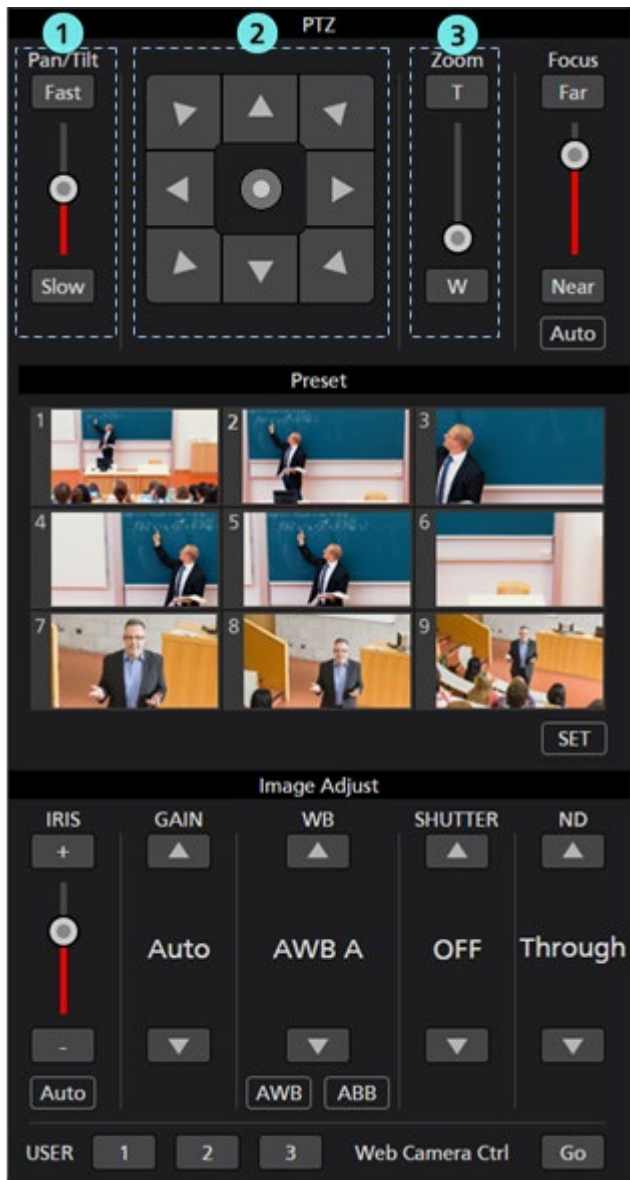
- PTZ operation
- Registering / calling / deleting the preset
- Adjusting the image
- Calling the Web screen

When using the camera controller, you must enable the operations by following the procedure described below.

1. Connect to the camera from the View screen or Main screen.
2. Select the camera for which operations are to be performed from the camera list display of the View screen or Main screen.

PTZ Operation of the Camera

You can perform the Pan/Tilt and Zoom operations of the remote camera.



①Pan/Tilt speed control part

Set the movement speed of the camera when it is moved by the Pan/Tilt button or slider. The currently set value is displayed by the red-colored bar of the slider.

②Pan/Tilt control part

If you click this button, the camera moves in the corresponding direction.

If you click the circular button in the center of the operation area, the operation area display switches and you can move the camera in the direction you desire by dragging with the mouse.

③Zoom position control part

Set the Zoom position of the remote camera by the T/W button or slider.

The currently set value is displayed by the red-colored bar of the slider.

<Notes>

- If the Pan/Tilt button is operated during the tracking operation, the tracking operation will be interrupted.
- When the remote camera is AW-UE4, the slider of the Zoom position control part is not displayed.

Registering / Calling / Deleting the Preset

You can register, call, or delete the preset of a remote camera.



• Registering the preset

1. Move the camera to the position that you want to register using the Pan/Tilt button and Zoom position control slider/button.
2. Click the SET button at the bottom left of the Preset area to set the camera to the ON state (red color).
3. Click any one of the Preset 1 to Preset 9 buttons in the Preset area to register the current camera position in the preset. The thumbnail during registration is displayed on the button.

• Calling the preset

1. Click the SET button at the bottom left of the Preset area to set the camera to the OFF state (gray color).

2. Click any one of the Preset 1 to Preset 9 buttons in the Preset area to call the preset.

- **Deleting the preset**

1. Click the Clear button at the bottom right of the Preset area to set the camera to the ON state (red color).
2. Click any one of the Preset 1 to Preset 9 buttons in the Preset area to delete the preset.

<Notes>

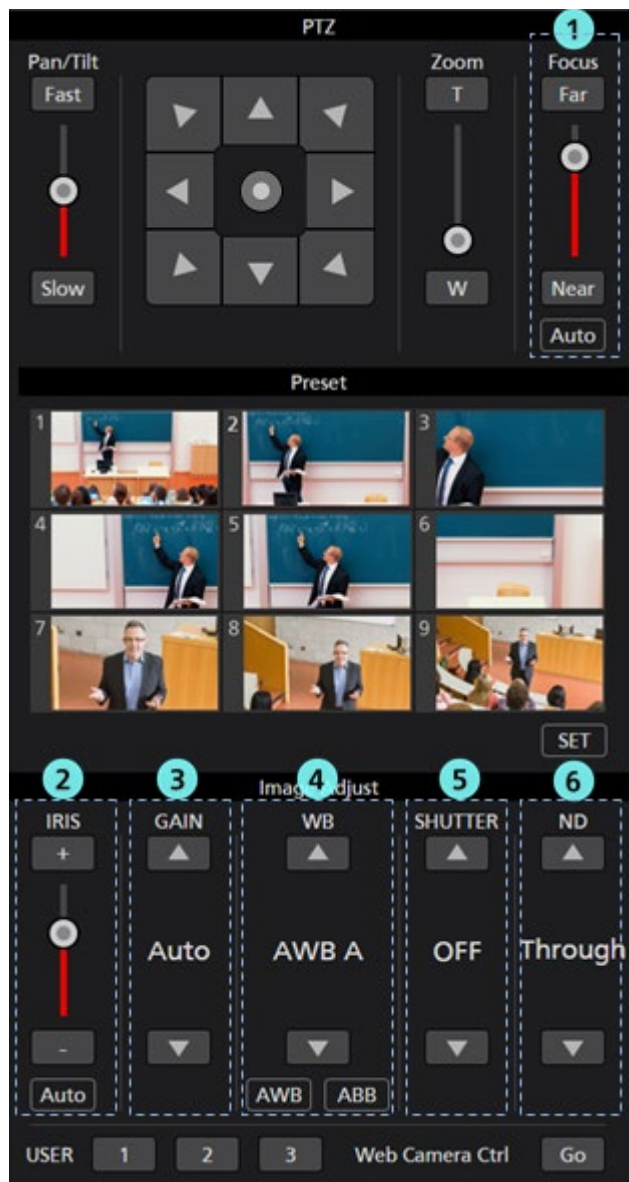
- If the preset calling operation is performed during the tracking operation, the tracking operation will be interrupted.

Adjusting the Image of the Remote Camera

You can adjust the images shot by the remote camera.

The items described below can be adjusted:

- Focus
- Iris
- Gain
- White balance
- Shutter
- ND Filter



①Focus control part

Click Auto to turn AutoFocus to ON or OFF.

When AutoFocus is ON, the remote camera sets the focus automatically.

When AutoFocus is OFF, the focus of the remote camera is set by the Far/Near buttons and the slider.

②Iris control part

Click Auto to turn AutoIris to ON or OFF.

When AutoIris is ON, the remote camera sets the iris automatically.

When AutoIris is OFF, the iris of the remote camera is set by the +/- buttons and the slider.

③Gain control part

Set the Gain of the remote camera by the Up/Down buttons.

④WB control part

Set the white balance mode of the remote camera by the Up/Down buttons.

If you click the AWB button, the remote camera performs the white balance adjustment automatically.

If you click the ABB button, the remote camera performs the black balance adjustment automatically.

⑤Shutter control part

Set the shutter of the remote camera by the Up/Down buttons.

⑥ND Filter control part

Set the ND Filter of the remote camera by the Up/Down buttons.

<Notes>

- It may not be possible to adjust some items depending on the type of the remote camera and combination of the operation modes. For details, refer to the operation manual of each remote camera.

Calling the Web Screen of the Camera

You can call the Web screen of the remote camera.



Click the Go button at the bottom right of the camera controller to open the Web management screen of the remote camera in another tab of the Web browser.

<Note>

Depending on your Web browser, symptoms such as disorder of part of the Web management screen of the remote camera may occur.

License

About the License

When using this software, you will require one license for connecting to one camera. Therefore, the number of cameras that can be connected simultaneously is restricted to the number of registered licenses.

The conditions of license consumption and return are as described below.

License consumption:

- One license is consumed during connection to a remote camera.

License return:

- One license is returned during disconnection from a remote camera.
- One license is returned when the state of communication disconnection from the remote camera continues for five minutes or more.

<Notes>

- The license usage status is displayed as “License (used/total)” at the top of the View screen or Main screen.

About the Trial Use Period

The trial use period of this software is 90 days during which the license of 16 remote cameras can be used free of charge.

The procedure for starting trial use is as described below.

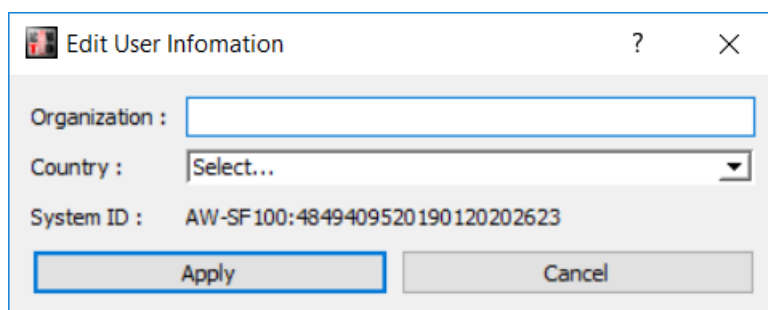
Procedure for starting trial use

1. Log in to the Main server Windows.
2. Run

PActivationManager.exe

from the “12_Activation” folder of the downloaded file.

3. When you start the activation program for the first time, a screen for registering user information appears. Enter the information in each item, and then click the Apply button.

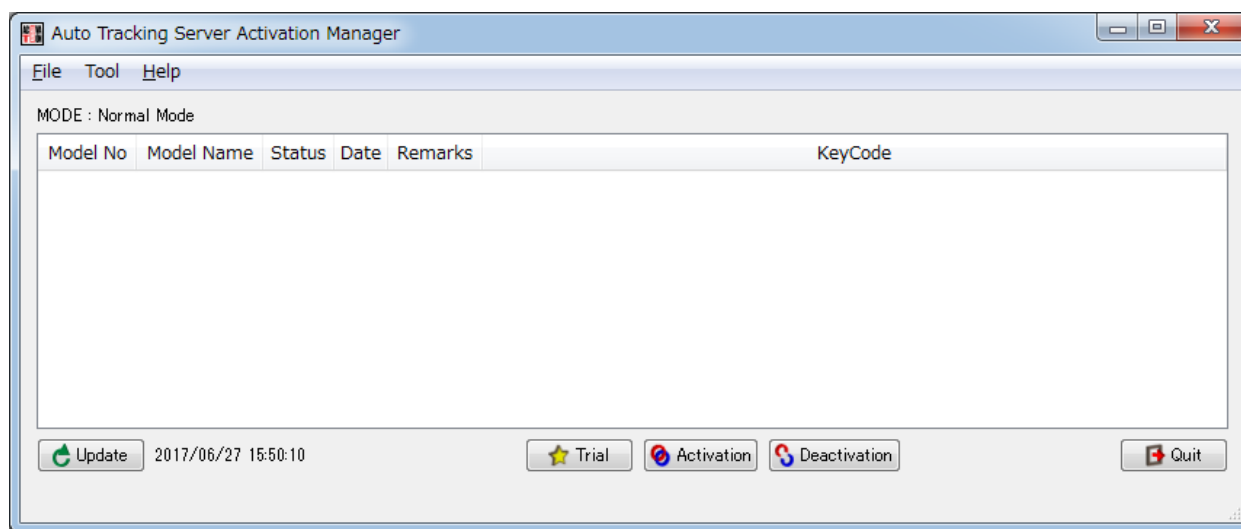


Organization :

Country :

System ID : AW-SF 100:4849409520190120202623

4. The window of the activation program is displayed.



5. Click the Trial button.
6. You can start using this software for the trial period.

<Notes>

- The remaining number of days of the trial use period is displayed on the top right of the View screen/Main screen.

Activation Registration

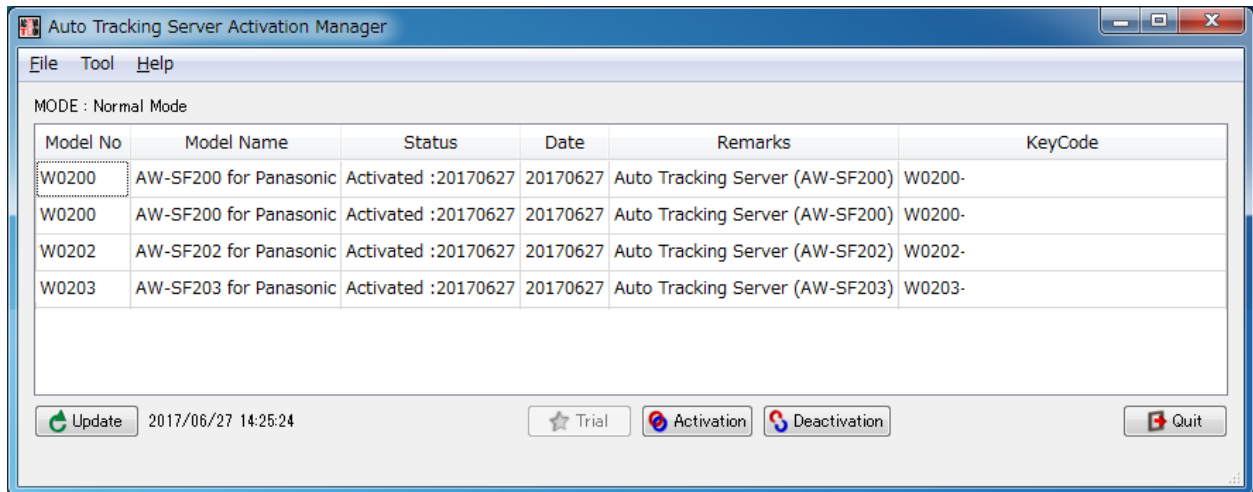
The free-of-charge license becomes invalid after the end of the trial use period, and you can no longer establish a connection to the remote camera.

To continue using the software, you must purchase a key code, and add the license by performing activation registration according to the procedure described below.

Procedure of activation registration

1. Connect the Main server to the Internet.

2. Log in to the Main server Windows.
3. Run
PActivationManager.exe
from the “12_Activation” folder of the downloaded file.
4. The window of the activation program is displayed.



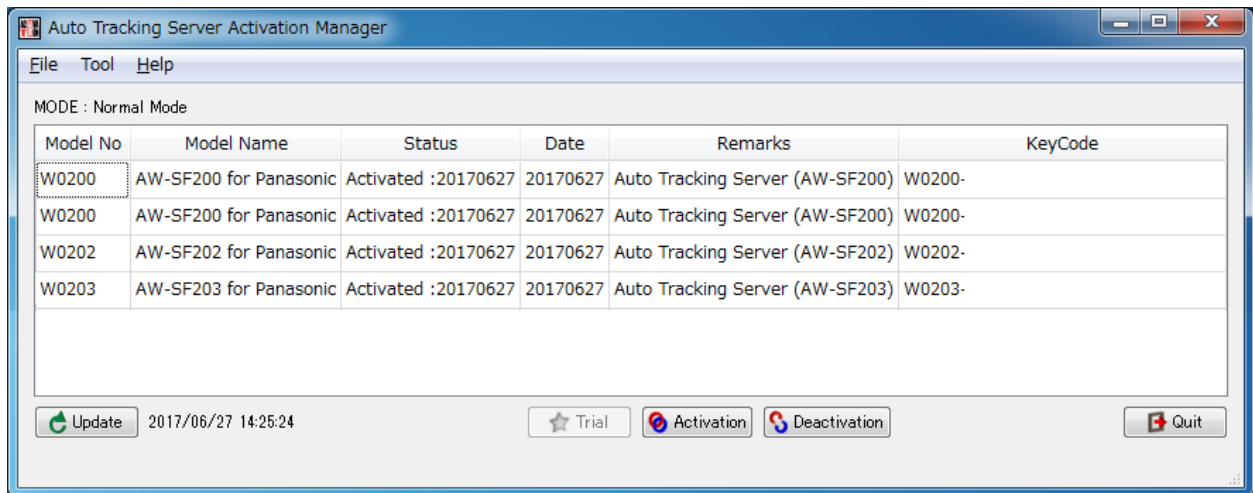
5. Click the Activation button.
6. The key code input screen appears. Enter the key code that you have purchased in the key code input field.
7. When you click the OK button, activation is performed, and licenses are added according to the registered key code.

Activation Cancellation

To change the Main server on which you are using this software, perform activation cancellation according to the procedure described below, and then perform activation registration on a new Main server.

Procedure of activation cancellation

1. Connect the Main server to the Internet.
2. Log in to the Main server Windows.
3. Run
PActivationManager.exe
from the “12_Activation” folder of the downloaded file.
4. The window of the activation program is displayed.



5. Select the column of the key code you want to cancel and then click the Deactivation button.
6. The activation is canceled, and licenses are deleted according to the canceled key code.

<Notes>

- When you perform activation cancellation, you can no longer use this software on the Main server until you perform activation registration again.

Appendix

Keyboard shortcut

Some operations can be performed from the keyboard connected to the PC.

The operations assigned to keys are as below.

Key	Operation
F1	Call preset 1
F2	Call preset 2
F3	Call preset 3
F4	Call preset 4
F5	Call preset 5
F6	Call preset 6
F7	Call preset 7
F8	Call preset 8
F9	Call preset 9
↑	Camera tilt Upward
↓	Camera tilt Downward
←	Camera pan Left
→	Camera pan Right
↑ + →	Camera pan/tilt Up/Right
→ + ↓	Camera pan/tilt Down/Right
↓ + ←	Camera pan/tilt Down/Left
← + ↑	Camera pan/tilt Up/Left
Shift + ↑	Camera tilt Upward (high speed)
Shift + ↓	Camera tilt Downward (high speed)
Shift + ←	Camera pan Left (high speed)
Shift + →	Camera pan Right (high speed)
Shift + ↑ + →	Camera pan/tilt Up/Right (high speed)
Shift + → + ↓	Camera pan/tilt Down/Right (high speed)
Shift + ↓ + ←	Camera pan/tilt Down/Left (high speed)
Shift + ← + ↑	Camera pan/tilt Left/Right (high speed)
Upper case 'T'	Camera zoom IN
Upper case 'W'	Camera zoom OUT
Upper case 'S'	Switch Tracking Start/Stop
Ctrl	Pause tracking only while the key is pressed

Troubleshooting

This section shows the causes of the symptoms that occur during the execution of this software, and the actions to be taken:

Cannot connect to the camera even after performing the remote camera connection process.

Cause 1:

- The PC and remote camera are not connected properly.

Action 1:

- Make sure the PC and the remote camera are properly connected via the network, and that the remote camera IP address on the Settings - Camera screen of this software is set correctly.

Cause 2:

- There is no available license.

Action 2:

- When using this software, you will require one license for connecting to one camera. Therefore, the number of cameras that can be connected simultaneously is restricted to the number of registered licenses.
If the number of connected cameras has reached the upper limit of the number of licenses, disconnect any one of the connected cameras.

Cause 3:

- The connected number of remote cameras of the server has reached the limit.

Action 3:

- Up to four remote cameras can be connected per one server when using this software. If the number of connected remote cameras has reached the limit, disconnect any one of the connected cameras.

The images are not displayed properly on the screen after connecting to a remote camera.

Cause 1:

- You are not using the latest version of the remote camera firmware.

Action 1:

- Download the latest version of the remote camera firmware from the Website provided below, and update the firmware.

<http://pro-av.panasonic.net/en/>

Cause 2:

- The settings of the remote camera have not been made properly.

Action 2:

- Carefully read "Default Settings - Remote Camera Settings" in the Installation Procedures of this software, and set the remote camera accordingly.

The tracking target switches to another object during the tracking operation.

Cause 1:

- There is an object that is moving close to the original tracking target.

Action 1:

- If there is a moving object close to the tracking target (within the white rectangle), the tracking target may switch to that moving object. Make sure there is no moving object close to the object that is to be set as the tracking target.

Cause 2:

- A stationary object with strong straight-line edges exists in the background.

Action 2:

- If a stationary object (straight-line edges) enters inside the red frame during tracking, the tracking target may switch to that object.

The tracking target is lost out of sight during the tracking operation.

Cause:

- The tracking target is a stationary object.

Action:

- If the tracking target is a stationary object, the tracking target may be lost out of sight.

Even if the tracking target is lost out of sight, tracking is resumed when the tracking target again enters the frame of the camera image.

When there are several persons in the camera image, an unintended person is set as the tracking target.

Cause:

- An object that is moving more than the object to be set as the target exists.

Action:

- Set the face data of the person to be tracked, and then set the Face Recognition ON/OFF button to the ON state (red color). Since face recognition starts functioning and the face of the person can be detected, the tracking operation is likely to improve.
- The tracking operation is likely to improve by setting an automatic detection mask area and an area in which detection is not required.

Uninstallation Procedure

1. From the Windows Control Panel, select [Programs and Features].
2. If you select [Auto Tracking Server Software] from the list of programs and then click [Uninstall], a confirmation screen appears.
3. Click [Yes] on the confirmation screen to uninstall the software.

<Notes>

- To stop the operation of this software, make the settings described below from the service management screen of Windows.
 1. Stop the two services, namely “Panasonic Auto Tracking Server (SF200)” and “Panasonic Tracking Control (SF200)”.
 2. Change the Startup Type of the “Panasonic Auto Tracking Server (SF200)” and “Panasonic Tracking Control (SF200)” services to “Manual”.

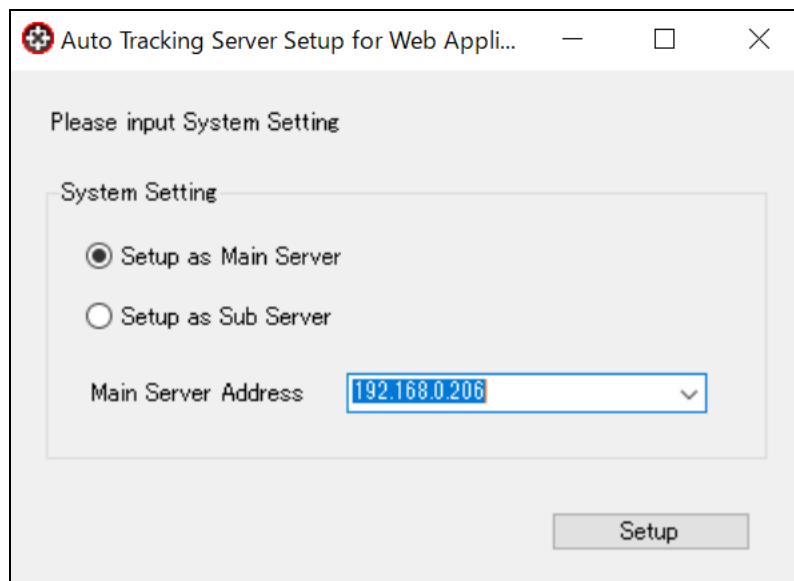
When changing the IP address of Main server

If you change the IP address of the Main server after installing this software, implement the following procedure for the Main server and each Sub server to change the settings of the software.

1. Run the IpAddressSetupTool.exe in the 13_IpAddressSetup folder of the file downloaded for this software.
2. The screen below appears.

If you are running it on the Main server, select Setup as Main Server and enter the Main server IP address in the Main Server Address field.

If you are running it on a Sub server, select Setup as Sub Server and enter the Main server IP address in the Main Server Address field.



3. Restart the Main server and each Sub server.

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