

**iii·PRO**

# Operating Instructions

## Extension Software


























Model No. **WV-SAE200, WV-SAE100**  
**WV-SAE200W, WV-SAE100W**



Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

# CONTENTS

Preface .....	3
Features.....	3
About notations.....	3
About the user manuals .....	4
System requirements .....	4
Trademarks and registered trademarks .....	4
Abbreviations .....	4
Before using this product  .....	5
Operations flow .....	6
Before purchasing .....	6
How to obtain and register the Registration Key .....	7
How to obtain and register the Registration Key  .....	7
How to obtain and register the Registration Key       .....	9
About the extension software window       .....	11
Unique information.....	11
Extension Software .....	12
Upgrade the Extension Software .....	12
Advanced func. (Face detection function)    .....	13
Setup menu .....	13
Configure the setting relating to the image recognition [Advanced func.] .....	14
i-VMD function  .....	16
About "Live" page when the i-VMD function is activated .....	17
Enable the i-VMD function [Alarm] .....	18
Configure the settings relating to i-VMD [i-VMD]     .....	19
Configure the settings relating to i-VMD [i-VMD]    .....	20
Configure the settings relating to the detection mode/area [Detection mode/area] .....	25
Set the detection depth.....	29
Set the line for people count [Line] .....	30
Set the i-VMD schedule [Schedule] .....	32
Configure the settings relating to TCP alarm notification [TCP alarm notification] .....	33
Configure the advanced settings relating to the i-VMD function [Advanced settings] .....	34

# Preface

The Extension Software WV-SAE200, WV-SAE200W, WV-SAE100, and WV-SAE100W (hereinafter, this product) are designed to enhance the usefulness of optional network cameras.

After registering the software, it is possible to use the following functions: the face detection function and the i-VMD function (alarm functions: intrusion detection/ loitering/ direction detection\*/ scene change/ object detection\*/ cross line detection\*, the analysis data control function: people count/heat map, and the privacy function: MOR (Moving Object Remover)).

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**Important:**

- This product is required per camera.
  - Refer to the following URL for details.  
[https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)
  - About the heat map function  
The heat map images cannot be seen with the functions of this product alone. The heat map functions will be available when our video management software WV-ASM200 [TYPE3] or WV-ASM300 [TYPE3] [TYPE5] [TYPE8] is used with this product.
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## Features

- Face detection function\*: It is possible to detect people's faces and display the face detection frames. It is also possible to add the function to notify the information of detected faces in the XML format.  
In combination with the Network Disk Recorder or the Additional Business Intelligence Kit, it is possible to use the face matching function.
- Alarm function <SAE200>: It is possible to add the detection function for intruder/ loitering/ direction\*/ scene change/ object\*/ cross line\*.  
With the i-VMD alarm function, it will become possible to set more detailed alarm detection conditions compared with the conventional VMD function. For example, an alarm can be issued when the motion of an object meets the specified conditions.
- People count\*/Heat map\* <SAE200>: Using i-VMD function, it provides function of counting the number of people and statistical information of traffic lines.
- MOR (Moving Object Remover)\* <SAE200>: It is a privacy-conscious function which removes people from the image and only send the background image.

\* In the above URL, check the models that support this function.

## About notations

The following notations are used when describing the functions limited for specified models.  
The functions without the notations are supported by all models.

Notation	
<SAE200>	The functions with this notation are available when using the model WV-SAE200 or WV-SAE200W.
<SAE100>	The functions with this notation are available when using the model WV-SAE100 or WV-SAE100W.

For further information about the functions restricted depending on network camera models, refer to the operating instructions of the network cameras in use.

The following marks indicate that the type of the camera of which operating procedure may vary or functions may be limited on use depending on the type (TYPE1, TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, TYPE8) of the network camera.

The operating procedure without this mark is for all models of network cameras.  
The functions without this mark are supported by all models of network cameras.

- [TYPE1] : Indicates the operating procedure and the functions only for TYPE1 network cameras.
- [TYPE2] : Indicates the operating procedure and the functions only for TYPE2 network cameras.
- [TYPE3] : Indicates the operating procedure and the functions only for TYPE3 network cameras.
- [TYPE4] : Indicates the operating procedure and the functions only for TYPE4 network cameras.
- [TYPE5] : Indicates the operating procedure and the functions only for TYPE5 network cameras.
- [TYPE6] : Indicates the operating procedure and the functions only for TYPE6 network cameras.
- [TYPE8] : Indicates the operating procedure and the functions only for TYPE8 network cameras.

\* Refer to the following URL for the models of TYPE1, TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 network cameras. [https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)

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## About the user manuals

This PDF manual contains how to register this product in network cameras, how to configure the required settings before starting running the software and how to operate the software.

This product is intended for the use after the registration in network cameras. Be sure to refer to the operating instructions of the network cameras in use together with this manual.

The illustrations of the screens of the network camera used in these operating instructions may be different depending on the network camera in use.

"WV-SAE200" shown in the instructions and illustrations used in this manual indicates the WV-SAE200, WV-SAE200W.

"WV-SAE100" shown in the instructions and illustrations used in this manual indicates the WV-SAE100, WV-SAE100W.

Adobe® Reader® is required to read these operating instructions (PDF) on the provided CD-ROM. When the Adobe® Reader® is not installed on the personal computer (hereinafter, PC), download the latest Adobe® Reader® from the Adobe web site and install it.

Covered by one or more claims of the HEVC patents listed at [patentlist.accessadvance.com](http://patentlist.accessadvance.com).

## System requirements

For further information about the system requirements for the operation from the PC, refer to the operating instructions of the network cameras in use.

## Trademarks and registered trademarks

- Adobe and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.
- All other trademarks identified herein are the property of their respective owners.

## Abbreviations

The following abbreviations are used in these operating instructions.

Network disk recorders are described as recorders, and network cameras as cameras.

# Before using this product

- The motion detection function will not effectively work in the following situations or may sometimes be malfunctioning.
  - There is no difference in luminance level between the moving object and background.
  - Luminance level of image is too low (During nighttime, etc.)
  - Movement of object is too fast or too slow.
  - Object is too big or too small.
  - Luminance level of shooting area is subject to change (outdoors, by the window, etc.)
  - Outside light (sunlight, headlights, etc.) enters the shooting area.
  - Fluorescent light is flickering.
  - Depth of object is too long.
  - Dirt, drip, or splash is on the dome cover of camera.
  - The subject is moving directly toward the camera.
  - Too many objects are moving.
  - Camera is shaking.
  - Weather condition is extremely poor.
  - Several people are crossing with each other.
  - The detection area is blocked with shadows.
- When there are factors for false detection such as shaky trees, driveways filled with cars or water surfaces reflecting light in the shooting area, it is possible to reduce the false detection by setting mask areas (☞ page 27).
- To enhance the detection accuracy, it is recommended to use the system in the following installation environment.
  - Set the angular field of view on the operation window in order to make the detection target to the following size in each aspect ratio.
    - When the aspect ratio is "4:3", adjust the angular field of view to make the size of the detection target to approx.1/6 to 1/3 (vertical direction).
    - When the aspect ratio is "16:9", adjust the angular field of view to make the size of the detection target to approx.1/4 to 1/3 (vertical direction).
    - When the aspect ratio is "9:16", adjust the angular field of view to make the size of the detection target to approx.1/4 to 1/3 (vertical direction).
    - When the aspect ratio is "1:1" (TYPE3/TYP5/TYP8) and the camera is installed on the wall, adjust the angular field of view to approx.1/8 to 1/4.
  - When the camera is to be installed on the ceiling, install at the height of 2.5 m to 4.0 m.
  - Specify the size of the objects to be detected by setting the depth (☞ page 29). \*
- When configuring the i-VMD settings, set the detection area (☞ page 26) and check the performance in the daytime and nighttime.
- In the following cases, scene change may not be detected.
  - Only a part of the shooting area is covered or the covered object can be seen.
  - Subjects look alike each other before and after the camera direction has been changed.
- For 1 minute after the power is turned on, the camera settings are changed or the angular field of view is changed for the camera, false detection may occur.
- When there is a detection target in the shooting area, alarm will repeatedly occur at a specified interval. Therefore, the mail notification and the notification using the TCP alarm notification will also be repeated at the specified interval.
- When using the i-VMD function, the frame rate of H.265/H.264 images may become lower.
- In no event shall i-PRO Co., Ltd. be liable to any party or any person for any problem, consequential inconvenience, or loss or damage, arising out of the i-VMD settings.
- i-VMD is not a function to prevent theft or fire. In no event shall i-PRO Co., Ltd. be liable to any party or any person for any accidents or loss.

\* The depth setting is not available for TYPE3, TYPE5, and TYPE8.

# Operations flow

## Before purchasing

Check the compatible models and software versions in the following URL when registering the Extension Software.

[https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)

**Note:**

- The operating procedure and the screens for installation of the Extension Software and the extension software file may vary depending on the type (TYPE1, TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, TYPE8) of the network camera.
- There are 7 types of the extension software files as follows. Check the file name.

**TYPE1**

Use the file whose name does not include "type2", "type3", "type4", "type5", "type6", or "type8". (Example: SAE200\_v100.ext) This corresponds to TYPE1 camera.

**TYPE2**

Use the file whose name includes "type2". (Example: SAE200\_v100\_type2.ext) This corresponds to TYPE2 camera.

**TYPE3**

Use the file whose name includes "type3". (Example: SAE200\_v100\_type3.ext) This corresponds to TYPE3 camera.

**TYPE4**

Use the file whose name includes "type4". (Example: SAE200\_v100\_type4.ext) This corresponds to TYPE4 camera.

**TYPE5**

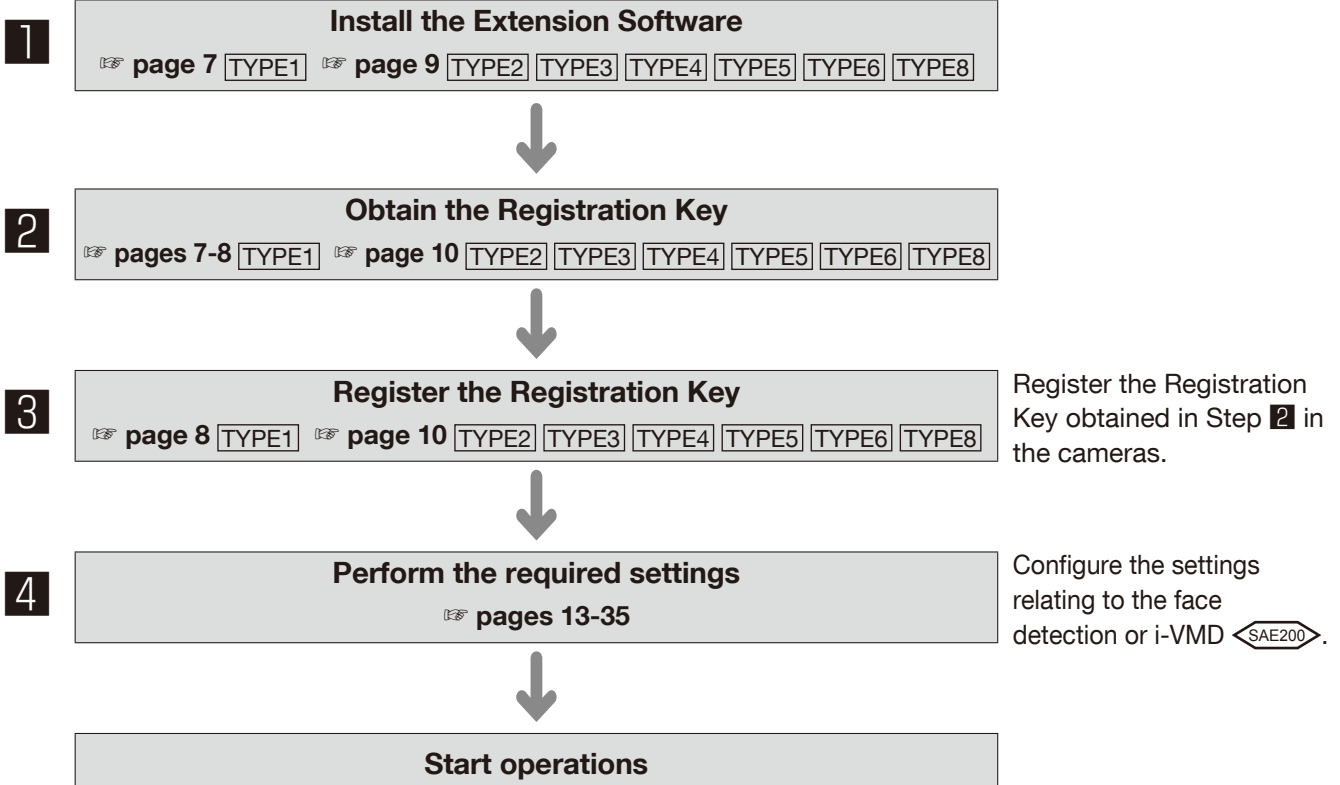
Use the file whose name includes "type5". (Example: SAE200\_v100\_type5.ext) This corresponds to TYPE5 camera.

**TYPE6**

Use the file whose name includes "type6". (Example: SAE200\_v100\_type6.ext) This corresponds to TYPE6 camera.

**TYPE8**

Use the file whose name includes "type8". (Example: SAE200\_v100\_type8.ext) This corresponds to TYPE8 camera.



# How to obtain and register the Registration Key

This product needs to be activated by "Registration Key" issued by Key Management System before you start using.

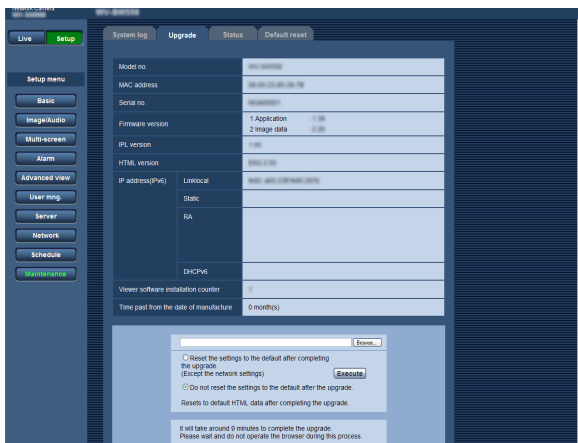
The registration of the Registration Key is only operable by users whose access level is [1. Administrator]. Refer to the operating instructions of the camera for how to configure the access level.

## How to obtain and register the Registration Key TYPE1

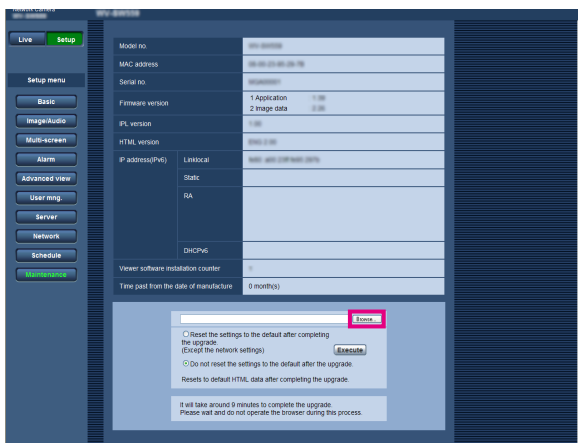
### Step 1

Install the Extension Software.

- (1) Access the following URL to download the Extension Software and save it onto the PC.  
[https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)
- (2) Access the camera, and display the setup menu - the "Maintenance" page - the [Upgrade] tab by clicking the corresponding buttons and tab.



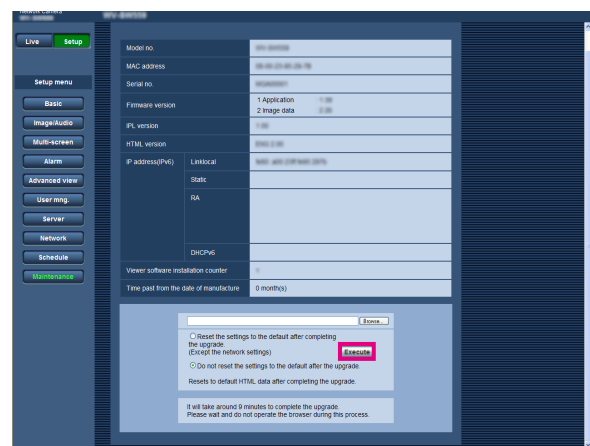
- (3) Click the [Browse...] button and designate the downloaded extension software.



- (4) Click the [Execute] button.

The installation of the Extension Software will start.

When the installation is completed, the camera will automatically restart.



### Important:

- Use the file (with an ".ext" extension) specified by us when installing the Extension Software.
- Do not turn off the power of the camera when installing the software. Do not perform any operations until the installation is completed.

### Step 2

Obtain the Registration Key.

- (1) Check the MPR ID, Activation Key No. and Registration ID.

Access the camera, and display the setup menu - the "Maintenance" page - the [Upgrade] tab by clicking the corresponding buttons and tab.

Click "Registration of application" -

"Registration>>" to display the "Entry information of the key management system" page, and check the MPR ID.

\* The MPR ID can also be checked on the product package.

The Activation Key No. and Registration ID are shown on the Activation Key Card.

- (2) Please access and login to the following URL "Key Management System" from your PC or Mobile Phone.

For PC: <https://kms.business.panasonic.net/ipkms/pc/home.htm>

Temporary User ID: kmsadmin\_reg  
Password: hpynBaxb

\* If this temporary User ID and password does not work, go to the above URL to check the latest temporary User ID and password.

For mobile: <https://kms.business.panasonic.net/ipkms/m-key/> (To issue the "Registration Key" only.)

\* Certain mobile phone are not compatible with "Key Management System".

\* You may not access "Key Management System" for server maintenance without notice.

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

Please login as a temporary user using the User ID and password written on the web page. Please register required information and create your account.

- (4) Enter the registered User ID and password on the "Key Management System" for login.

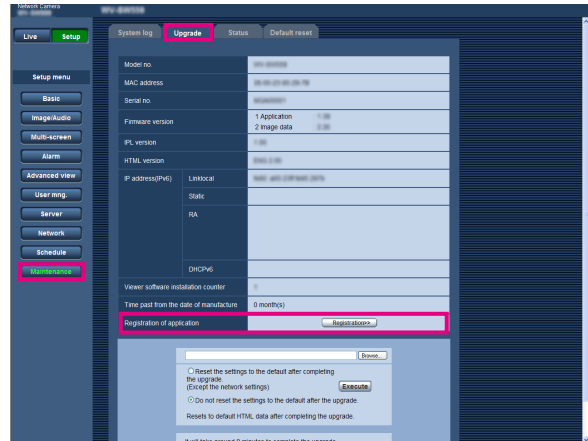
- (5) Enter "MPR ID", "Installation Site Information", "Activation Key No." and "Registration ID" by following the instructions displayed on the monitor.

- (6) The Registration Key will be issued. Note it down on the Activation Key Card, and keep the card so as not to lose.

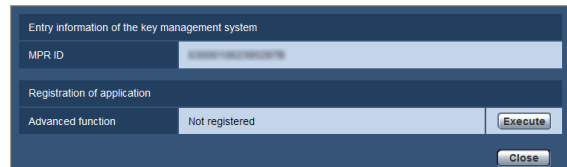
### Step 3

Register the Registration Key.

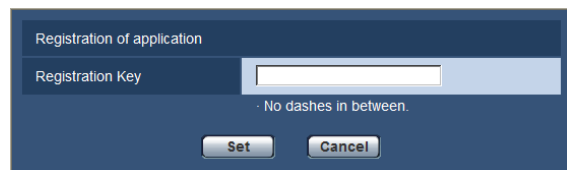
- (1) Access the camera, and display the setup menu - the "Maintenance" page - the [Upgrade] tab by clicking the corresponding buttons and tab.



- (2) Click "Registration of application" - "Registration>>" to display the "Entry information of the key management system" page.



- (3) Click the [Execute] button of "Registration of application" to display the "Registration of application" page.



- (4) Enter the Registration Key obtained in Step 2 in the "Registration Key" field, and click the [Set] button.

After the Registration Key is registered, the Extension Software will be validated.

Enter the Registration Key without the hyphens (-).

\* Check the compatible models in the following URL when registering the application.

[https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)

\* To uninstall the extension software, it is necessary to reset to the factory shipping state.



# How to obtain and register the Registration Key

TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE8

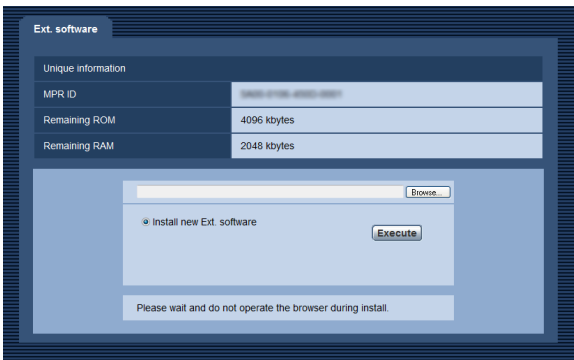
## Step 1

Install the Extension Software.

- (1) Access the following URL to download the Extension Software and save it onto the PC.  
[https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)
- (2) Enter the following URL on the web browser.  
[http://\(the IP address of the camera\)/admin/setup\\_ext\\_software.html](http://(the IP address of the camera)/admin/setup_ext_software.html)

### Note:

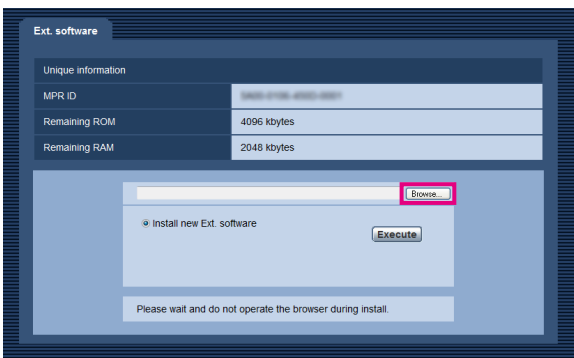
- The "Ext. software" page can be displayed by clicking the [Ext. software >>] button accessing from the setup menu - the "Maintenance" page - the [Upgrade] tab.



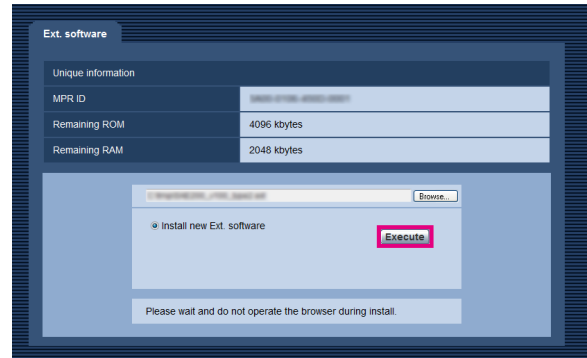
### Important:

- Check "Remaining ROM" and "Remaining RAM" of the camera. When the other extension software is already installed, it is necessary to uninstall it or prepare another camera. Refer to page 12 for further information about uninstallation.

- (3) Click the [Browse...] button and designate the downloaded extension software.



- (4) Click the [Execute] button. The installation of the Extension Software will start.



### Important:

- Double-byte characters cannot be used for the name of the saving directory.
- Use the file (with an ".ext" extension) specified by us when installing the Extension Software.
- Do not turn off the power of the camera when installing the software. Do not perform any operations until the installation is completed.
- If installation fails, information of the Extension Software will not be displayed. Check the ROM/RAM volume of the Extension Software and the camera version.

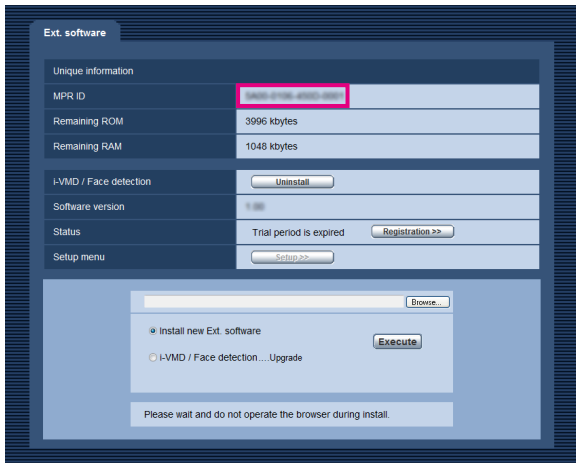
### Note:

- No trial period is provided for the face detection or i-VMD function.

## Step 2

Obtain the Registration Key.

- (1) Check the MPR ID, Activation Key No. and Registration ID.
  - Enter the following URL in the browser and check "MPR ID".  
[http://\(the IP address of the camera\)/admin/setup\\_ext\\_software.html](http://(the IP address of the camera)/admin/setup_ext_software.html)



\* The MPR ID can also be checked on the product package.

- The Activation Key No. and Registration ID are shown on the Activation Key Card.

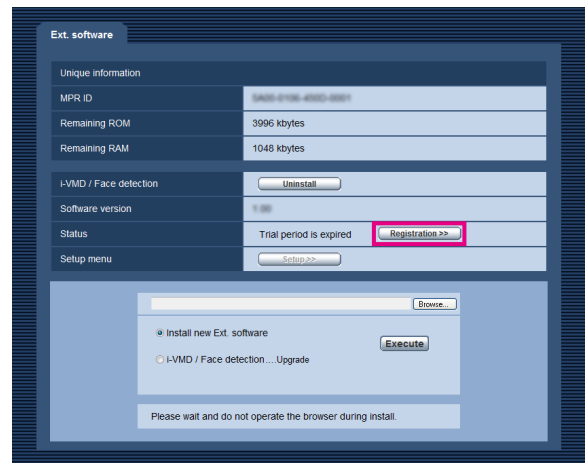
- (2) Please access and login to the following URL "Key Management System" from your PC or Mobile Phone.  
For PC: <https://kms.business.panasonic.net/ipkms/pc/home.htm>  
Temporary User ID: kmsadmin\_reg  
Password: hpynBaxb  
\* If this temporary User ID and password does not work, go to the above URL to check the latest temporary User ID and password.  
For mobile: <https://kms.business.panasonic.net/ipkms/m-key/> (To issue the "Registration Key" only.)  
\* Certain mobile phone are not compatible with "Key Management System".  
\* You may not access "Key Management System" for server maintenance without notice.
- (3) Please create your User ID and password, if it is the first time to access this system. Please login as a temporary user using the User ID and password written on the web page. Please register required information and create your account.

- (4) Enter the registered User ID and password on the "Key Management System" for login.
- (5) Enter "MPR ID", "Installation Site Information", "Activation Key No." and "Registration ID" by following the instructions displayed on the monitor.
- (6) The Registration Key will be issued. Note it down on the Activation Key Card, and keep the card so as not to lose.

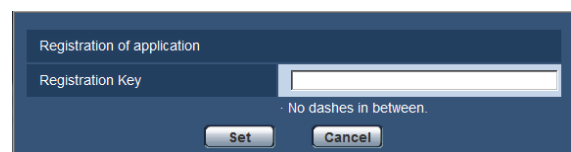
## Step 3

Register the Registration Key.

- (1) Enter the following URL in the browser.  
[http://\(the IP address of the camera\)/admin/setup\\_ext\\_software.html](http://(the IP address of the camera)/admin/setup_ext_software.html)



- (2) Click the [Registration >>] button and display the "Registration of application" window.



- (3) Enter the Registration Key obtained in Step 2 in the "Registration Key" field, and click the [Set] button. After the Registration Key is registered, the Extension Software will be validated. Enter the Registration Key without the hyphens (-).  
\* Check the compatible models in the following URL when registering the application.  
[https://i-pro.com/global/en/surveillance/training\\_support/support/kms/](https://i-pro.com/global/en/surveillance/training_support/support/kms/)

# About the extension software window

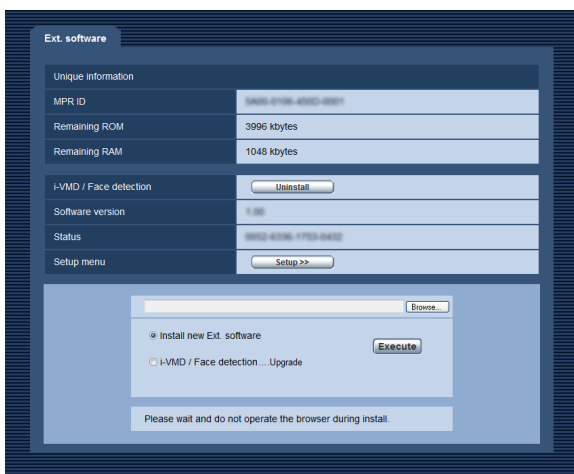
When the installation of the Extension Software is completed, registration status of the Extension Software and unique information will be displayed. The following operations are available on this window.

- Uninstallation of the Extension Software
- Display of the detailed registration status window
- Display of the extension software setting window
- Updating of the Extension Software

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**Note:**

- It is possible to install up to 2 extension software.
  - It is impossible to run multiple extension software concurrently.
- 



## Unique information

### [MPR ID]

This ID is required to run the Extension Software. Each camera has a unique one.

### [Remaining ROM]

Remaining capacity of ROM in the camera to be used for the Extension Software will be displayed. When the Extension Software to be installed requires ROM capacity more than the capacity displayed here, it is impossible to install it.

### [Remaining RAM]

Remaining capacity of RAM in the camera to be used for the Extension Software will be displayed. When the Extension Software to be installed requires RAM capacity more than the capacity displayed here, it is impossible to install it.

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**Note:**

- Capacity that the Extension Software can use may vary depending on the model or version of camera.
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## Extension Software

### **[Uninstall] button**

It is possible to uninstall the installed extension software.

### **[Software version]**

When the Extension Software is installed, version information of the installed extension software will be displayed.

### **[Status]**

When the Extension Software is installed, registration status of the installed extension software will be displayed.

xxxx-xxxx-xxxx-xxxx: When the registration key is displayed, registration of the installed extension software is completed. When the registration is completed, it is possible to run the Extension Software.

### **[Setup >>] button**

When the Extension Software has a unique window such as a setting window, etc., it is possible to display it.

## Upgrade the Extension Software

Select the installed extension software, and then click the [Execute] button to upgrade the Extension Software.

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### **Important:**

- The i-VMD alarm function of the TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 camera cannot be used only by installing the extension software. To enable the i-VMD alarm function of the TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 camera, make sure to set up the i-VMD schedule in the "Schedule" page.

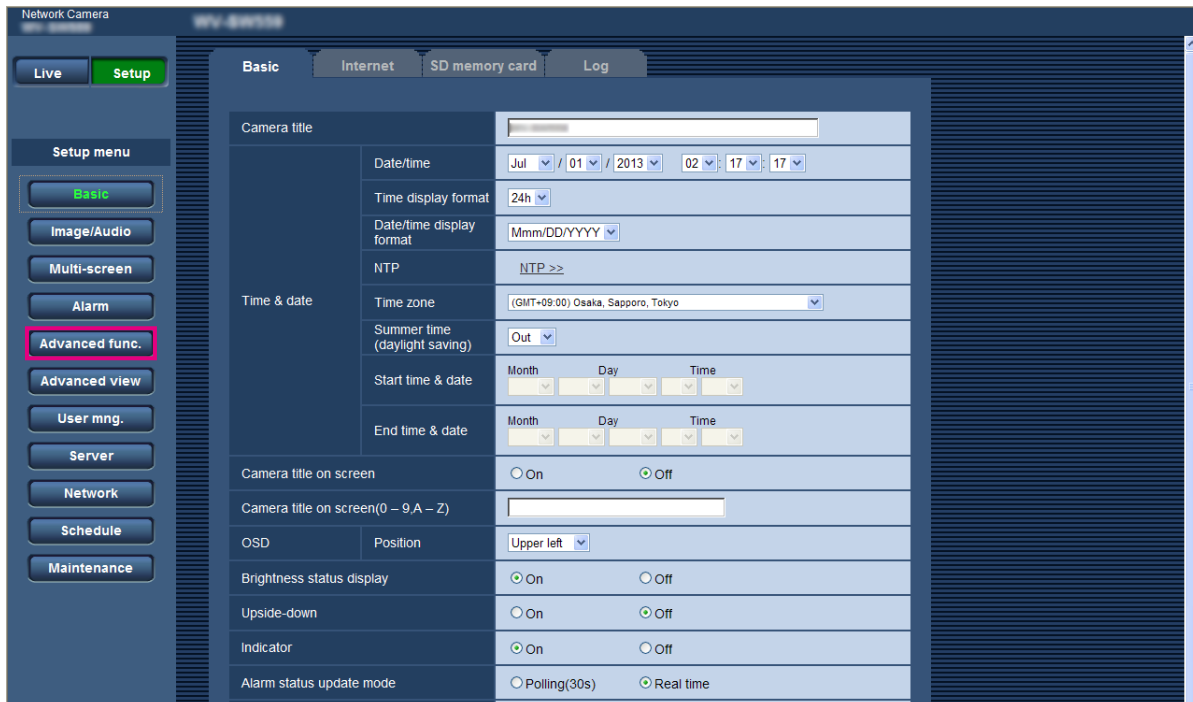
( page 32)

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# Advanced func.(Face detection function) TYPE1 TYPE2 TYPE4

## Setup menu

When the application for the advanced func. (face detection function) is added, the [Advanced func.] button will be displayed.



### [Advanced func.] button

Display the "Advanced func." page. The settings relating to the XML notification, the destination of information relating to the face detection and the settings relating to the face detection can be configured on the "Advanced func." page.

# Configure the setting relating to the image recognition [Advanced func.]

The settings relating to the XML notification and the settings relating to the face detection can be configured on the "Advanced func." page.

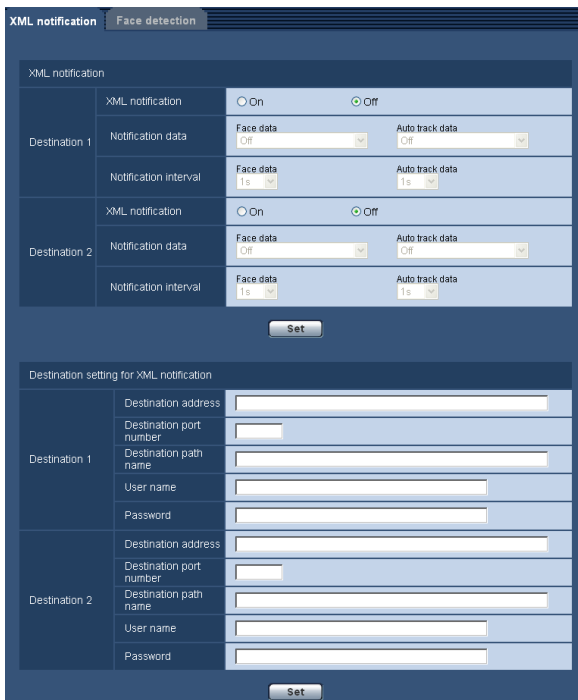
The "Advanced func." page has 2 tabs; the [XML notification] tab and the [Face detection] tab.

## Configure the settings relating to the XML notification [XML notification]

Click the [XML notification] tab on the "Advanced func." page.

The settings relating to the XML notification can be configured in this section.

The XML notification notifies the server of information such as auto tracking\*1 or face detection in XML format.



### XML notification

#### [XML notification]

Select "On" or "Off" to determine whether or not to notify face detection information using XML.

Default: Off

#### [Notification data]

Select the type of data notification.

Select one of the following.

- Face data  
Off\*1/Detection info.(Original)/Detection info. (Advanced)  
Default: Off\*1/Detection info.(Original)
- Auto track data\*1  
Off/Detection info.(Advanced)  
Default: Off

#### [Notification interval]

Select the notification interval.

- Face data  
1 s / 2 s / 3 s / 4 s / 5 s / 6 s / 10 s / 15 s / 20 s / 30 s / 1 min  
Default: 1 s

#### Note:

- When [Notification data] is set to "Detection info. (Original)", the [Notification interval] can only be set to "1 s" or "2 s".

- Auto track data\*1  
1 s / 2 s / 3 s / 4 s / 5 s / 6 s / 10 s / 15 s / 20 s / 30 s / 1 min  
Default: 1 s

\*1 Available only for cameras compatible with the auto track function

### Destination setting for XML notification

#### [Destination address]

Configure the IP address or the host name of the destination for XML notification.

Available number of characters: 1 - 128 characters

Available characters: Alphanumeric characters, the period (.), the underscore (\_), and the hyphen (-).

#### [Destination port number]

Configure the port number settings for XML notification.

The following port numbers are unavailable since they are already in use.

20, 21, 23, 25, 42, 53, 67, 68, 69, 110, 123, 161, 162, 443, 995, 10669, 10670

#### [Destination path name]

Configure the settings for the destination directory to be used for the XML notification.

Available characters: Alphanumeric characters, the period (.), the underscore (\_), the hyphen (-), the slash (/), and the colon (:).

### [User name]

Enter a user name.

Available number of characters: 0 - 32 characters

Unavailable characters: " & ; ; \

Default: None (blank)

### [Password]

Enter the password.

Available number of characters: 0 - 32 characters

Unavailable characters: " &

Default: None (blank)

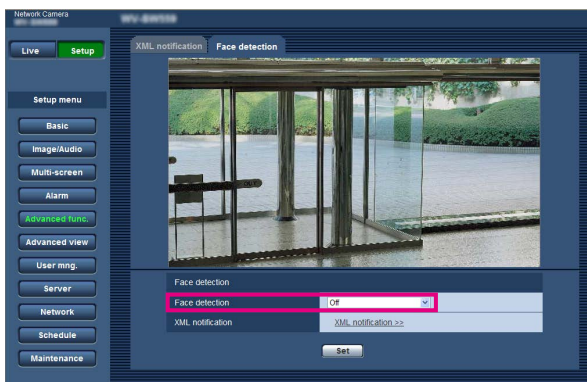
## Configure the settings relating to the face detection [Face detection]

Click the [Face detection] tab on the "Advanced func." page.

The settings relating to displaying the frame to be used for the face detection and the settings relating to the face detection information attached to the image can be configured.

### Important:

- The face detection function shall not guarantee the detection of faces in an image.
- The face detection accuracy varies with imaging conditions.



## Face detection

### [Face detection]

Determine whether or not to attach face detection information to images. In addition, determine whether or not to display the detection frame on the "Live" page.

Off: Information about the face detection frame will not be attached to images. No face detection frame will be displayed on the image of this page.

On: Information about the face detection frame will be attached to images and the test frame will be displayed on the image of this page. The face detection frame will not be displayed on the "Live" page.

On with face frame display\*<sup>1</sup>: Information about the face detection frame will be attached to images and the test frame will be displayed on the image of this page. The face detection frame will be displayed on the "Live" page.

Default: Off

\*<sup>1</sup> The BL series cameras do not support the "On with face frame display" function.

### [XML notification]

The destination settings of the face detection information can be configured.

When clicking "XML notification >>", the [XML notification] tab will be displayed. (page 14)

# i-VMD function

When the application for the i-VMD function is added, it becomes possible to use the i-VMD, which is one of the image recognition functions. It is possible to detect the motion of objects in the shooting area by configuring the detection condition (detection program) in advance. When the motion of an object is detected, a frame or track will be displayed on live images.

It is also possible to specify the range within people move or the size of objects to be detected by configuring the depth. With TYPE3 / TYPE5 / TYPE8 camera, analysis data of people count/heat map functions can be managed, and also privacy-conscious images can be transmitted using MOR (Moving Object Remover).

## • Intruder

By configuring the intruder detection area, it is possible to issue an alarm when a moving object enters the area. (To prevent a false alarm, the moving object is required to be detected for 2 seconds\*<sup>1</sup> or more.)

Up to 8 objects [TYPE1] [TYPE2] [TYPE4] [TYPE6], or 32 objects [TYPE3] [TYPE5] [TYPE8] can be detected simultaneously per channel. It is impossible to detect 9 objects [TYPE1] [TYPE2] [TYPE4] [TYPE6], or 33 objects [TYPE3] [TYPE5] [TYPE8] or more. (Depending on the size of moving object, the specified maximum number of objects may not be detected.)

## • Loitering

By configuring the intruder detection area, it is possible to issue an alarm when a moving object enters the area and stays for the specified period. (To prevent a false alarm, the moving object is required to be detected for 10 seconds\*<sup>1</sup> or more.)

Up to 8 objects [TYPE1] [TYPE2] [TYPE4] [TYPE6], or 32 objects [TYPE3] [TYPE5] [TYPE8] can be detected simultaneously per channel. It is impossible to detect 9 objects [TYPE1] [TYPE2] [TYPE4] [TYPE6], or 33 objects [TYPE3] [TYPE5] [TYPE8] or more. (Depending on the size of moving object, the specified maximum number of objects may not be detected.)

## • Direction [TYPE1] [TYPE2] [TYPE4] [TYPE6]

By configuring the direction detection area and the direction for detection, it is possible to issue an alarm when a moving object enters the area and moves to the specified direction. (To prevent a false alarm, the moving object is required to be detected for 2 seconds\*<sup>1</sup> or more.)

Up to 8 objects can be detected simultaneously per channel. It is impossible to detect 9 objects or more. (Depending on the size of moving object, the specified maximum number of objects may not be detected.)

## • Scene change

By configuring the scene change detection setting, it is possible to issue an alarm when a camera is covered with something or the camera direction is changed to shoot a different subject. (To prevent a false alarm, the entire scene is required to be changed for 2 seconds\*<sup>1</sup> [TYPE1], 3 seconds\*<sup>1</sup> [TYPE2] [TYPE3] [TYPE4] [TYPE5] [TYPE6] [TYPE8] or more.)

## • Object [TYPE2] [TYPE3] [TYPE4] [TYPE5] [TYPE6] [TYPE8]

By configuring an object detection area, it is possible to issue an alarm if an object (suspicious object, etc.) is left behind in the area or taken away from the area. (To prevent a false alarm, the object is required to be detected for 30 seconds\*<sup>1</sup> or more.) Up to 8 objects [TYPE2] [TYPE4] [TYPE6], or 24 objects [TYPE3] [TYPE5] [TYPE8] can be detected simultaneously per channel. It is impossible to detect 9 objects [TYPE2] [TYPE4] [TYPE6], or 25 objects [TYPE3] [TYPE5] [TYPE8] or more. (Depending on the size of object, the specified maximum number of objects may not be detected.)

## • Cross line [TYPE2] [TYPE3] [TYPE4] [TYPE5] [TYPE6] [TYPE8]

By configuring a line, it is possible to issue an alarm when an object moving to the specified direction crossed the line. Up to 8 objects [TYPE2] [TYPE4] [TYPE6], or 32 objects [TYPE3] [TYPE5] [TYPE8] can be detected simultaneously per channel. It is impossible to detect 9 objects [TYPE2] [TYPE4] [TYPE6], or 33 objects [TYPE3] [TYPE5] [TYPE8] or more. (Depending on the size of moving object, the specified maximum number of objects may not be detected.)

\*1 It is possible to change the detection time.

Configure the advanced settings relating to the i-VMD function [Advanced settings] ( page 34)

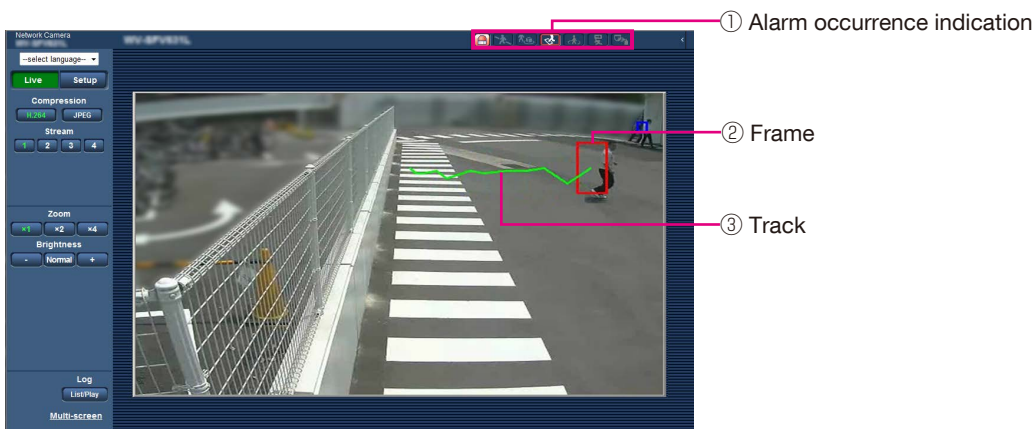
---

### IMPORTANT:

- When the selected value for "Maximum shutter" in the [Image adjust] page (under [Setup] - [Image/Audio] - [Image/Position]) is larger than "Max. 1/30s", deterioration of the recognition performance may sometimes be seen.



# About "Live" page when the i-VMD function is activated



## ① Alarm occurrence indication

This indication will light red when the i-VMD function is activated.

By clicking the [>] button beside the indication, it is possible to check the alarm status for each detection type. It is possible to clear the alarm status indication by clicking the alarm occurrence indication again.

At this time, the alarm status for every alarm icon will be cleared.

By clicking the [<] button, it is possible to hide the alarm status for each detection type.

- : Intruder
- : Loitering
- : Direction\*
- : Scene change
- : Object  TYPE2  TYPE3  TYPE4  TYPE5  
 TYPE6  TYPE8
- : Cross line  TYPE2  TYPE3  TYPE4  
 TYPE5  TYPE6  TYPE8

## ② Frame

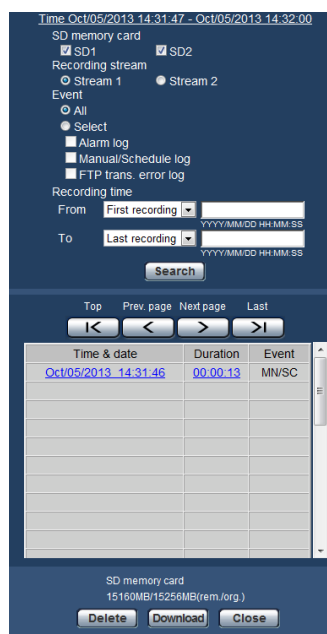
Blue frame will be displayed when a moving object is detected in the shooting area. The frame will turn red when the detected moving object enters the detection area that has been set, and an alarm occurs. It is possible to display or hide the frame and the track by configuring the settings for "i-VMD information addition" on the [i-VMD] tab.

## ③ Track

The track of motion made by the detected moving object will be displayed in green. The track will be displayed for 3 seconds. It is possible to display or hide the frame and the track by configuring the settings for "i-VMD information addition" on the [i-VMD] tab.

## Note:

- The log will be displayed when an alarm occurs. For details, refer to "Display the log list" in the operating instructions of the camera.



## [Event]

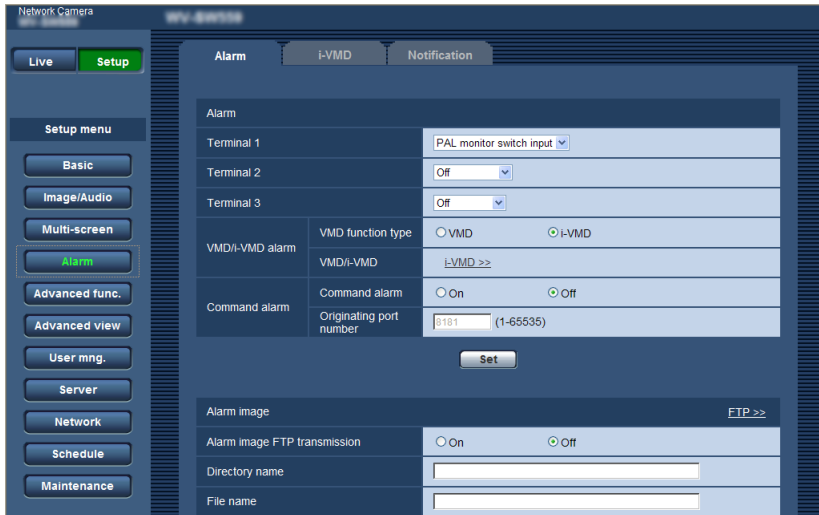
The following indicates the events for the log occurrence:

- INT: Alarm by intruder detection
- LOI: Alarm by loitering detection
- DIR\*: Alarm by direction detection
- SCD: Alarm by scene change detection
- OBJ: Alarm by object detection  
 TYPE2  TYPE3  TYPE4  TYPE5  
 TYPE6  TYPE8
- CLD: Alarm by cross line detection  
 TYPE2  TYPE3  TYPE4  TYPE5  
 TYPE6  TYPE8

\* It is not available for TYPE3, TYPE5, and TYPE8.

## Enable the i-VMD function [Alarm]

To enable the i-VMD function, configure the VMD function type\* setting on the [Alarm] tab of the "Alarm" page.



[VMD function type] TYPE1

[Function type] TYPE2 TYPE3 TYPE4 TYPE5

TYPE6 TYPE8

Determine to use the conventional VMD function or the i-VMD function.

It is impossible to use both of them simultaneously.

VMD: Enables the conventional VMD function.

i-VMD: Enables the i-VMD function.

Default: VMD

### [VMD/i-VMD]

When clicking "i-VMD >>", the [i-VMD] tab will be displayed. This link is displayed when "i-VMD" is selected for "VMD function type".

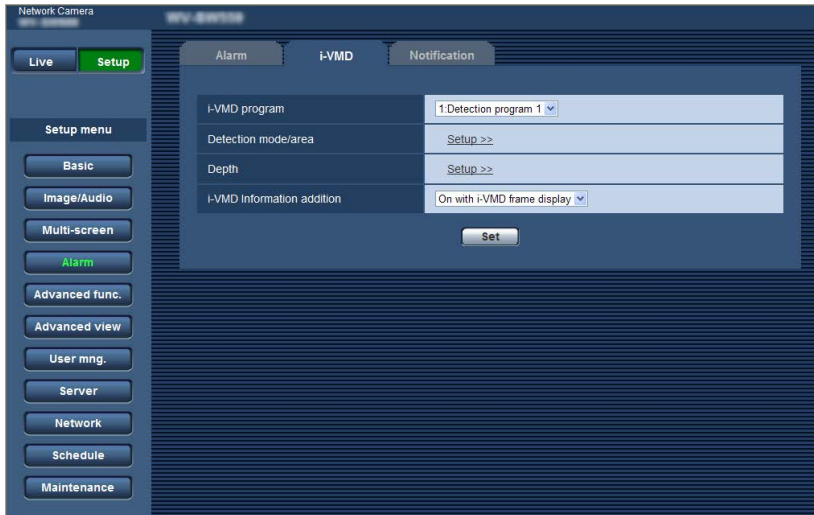
\* The indication is "Function type" for TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 cameras.

# Configure the settings relating to i-VMD [i-VMD]

TYPE1 TYPE2 TYPE4 TYPE6

Click the [i-VMD] tab on the "Alarm" page.

The settings relating to the i-VMD action, detection areas, depth, i-VMD information addition, frame and track can be configured on the "i-VMD" page.



## [i-VMD program] TYPE1

Configure the settings relating to the i-VMD action.

Off: Disables the i-VMD action.

1:Detection program 1: Performs the i-VMD action based on the conditions set for "Detection program 1".

2:Detection program 2: Performs the i-VMD action based on the conditions set for "Detection program 2".

Schedule: Performs the i-VMD action based on the conditions set on the "Schedule" page.

Default: 1:Detection program 1

## [Detection mode/area]

When clicking "Setup >>", the setup page relating to the detection mode/area will be displayed.

The settings relating to detection areas, detection types, mask areas and scene change ON/OFF for "1:Detection program 1" and "2:Detection program 2" can be configured on this page.

## [Depth]

When clicking "Setup >>", the setup page relating to the depth will be displayed. The markers for the depth settings can be configured on this page.

## [i-VMD information addition]

Determine whether to attach the i-VMD information to images, and whether to display the frame and track on live images. In the case of "On with i-VMD frame display" is selected, a blue frame will be displayed when a moving object is detected in the shooting area. The frame will turn to red when the detected moving object enters the set detection area and an alarm occurs. In addition, the track of moving object will be displayed in green.

The track will be displayed for 3 seconds.

Alarm actions will not be affected even when "Off" is selected for "i-VMD information addition" or the i-VMD frame display.

Off: The i-VMD information will not be attached. No frame or track will be displayed on live images.

On: The i-VMD information will be attached, but no frame or track will be displayed on live images.

On with i-VMD frame display: The i-VMD information will be attached, and the frame and track will be displayed on live images.

Default: On with i-VMD frame display

---

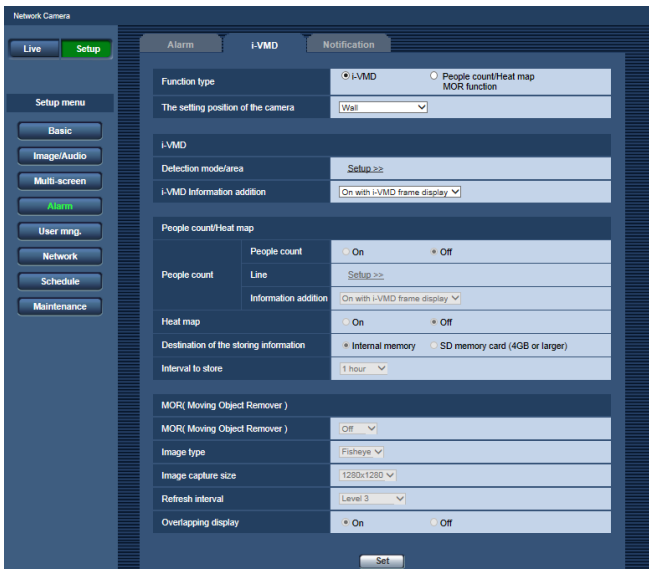
### Note:

- When a cropping image or sub window image is displayed on live images, no frame or track will be displayed.
-

## Configure the settings relating to i-VMD [i-VMD] TYPE3 TYPE5 TYPE8

Click the [i-VMD] tab on the "Alarm" page.

The following settings can be configured on the "i-VMD" setup page: the functions, the setting position of the camera, detection area, i-VMD additional information, area and tracking display, people count, heat map, destination of the storing information, interval to store, MOR (Moving Object Remover).



### [Detection mode/area]

When clicking "Setup >>", the setup page relating to the detection mode/area will be displayed.

The settings relating to detection areas, detection types, mask areas and scene change ON/OFF for "1:Detection program 1" and "2:Detection program 2" can be configured on this page.

### [i-VMD Information addition]

Determine whether to attach the i-VMD information to images, and whether to display the frame and track on live images. In the case of "On with i-VMD frame display" is selected, a blue frame will be displayed when a moving object is detected in the shooting area. The frame will turn to red when the detected moving object enters the set detection area and an alarm occurs. In addition, the track of moving object will be displayed in green.

The track will be displayed for 3 seconds.

Alarm actions will not be affected even when "Off" is selected for "i-VMD information addition" or the i-VMD frame display.

Off: The i-VMD information will not be attached. No frame or track will be displayed on live images.

On: The i-VMD information will be attached, but no frame or track will be displayed on live images.

On with i-VMD frame display: The i-VMD information will be attached, and the frame and track will be displayed on live images.

Default: On with i-VMD frame display

### [Function type]

Determine whether to use "i-VMD" or "People count/Heat map/MOR function".

i-VMD: Enables alarm notifications by detecting Intruder, Loitering, Scene Change, Object, Cross line.

People count/Heat map/MOR function: Enables functions of People count, Heat map, MOR (Moving Object Remover).

Default: i-VMD

### [The setting position of the camera]

Selects where the camera is installed.

Wall/ Ceiling 2.5m(8.5ft)/ Ceiling 3.0m(10ft)/

Ceiling 3.5m(11.5ft)/ Ceiling 4.0m(13.5ft)

Default: Ceiling 3.0m(10ft)

## i-VMD

### Note:

- The "i-VMD" is not available when "Double panorama", "Panorama", "Quad PTZ", "Single PTZ", or "Quad streams" is selected for "Image capture mode" even when "i-VMD" is selected for "Function type".
- Fisheye images will be used with the i-VMD function.

## People count/Heat map

### Note

- In order to avoid degradation in the detection accuracy, it is recommended to select "Off" for "Camera title on screen" and "Time display format" ([Basic] tab of the [Setup] - [Basic] page).

### [People count]

Select "On" or "Off" to specify whether to enable the "People count".

On: Counts people who crossed the line in a certain direction which is set with "Line".

The number of counts and the index images will be saved in the internal memory or the SD memory card.

Off: Disable people counting.

Default: Off

---

**Note:**

- The "People count" is not available when "Double panorama", "Panorama", "Quad PTZ", "Single PTZ", or "Quad streams" is selected for "Image capture mode".
  - Fisheye images will be used with the people count function.
  - In the following period, the counted number and the index images with "People count" function will not be saved.
    - First 5 minutes after software is started up, when "People count" is enabled.
    - First 5 minutes after changing the setting of "People count" from "Off" to "On".
  - To set up the area where no mapping information with "People count" to be generated, set up the mask area in the "Detection mode/area" page. In this case, other than mask area setting cannot be set in the "Detection mode/area" page.
- 

**[Line]**

The setup page for the lines of people count function will be displayed when the "Setup >>" is clicked.

**[Information addition]**

Determine whether to attach the people count information to images, and whether to display the counted number on the live images.

When the counted number is set to be displayed, the number counts up when a person crosses the specified line in a certain direction.

The number of counts is reset per setting in the "Interval to store".

The "People count" still functions even when "Off" or "On" is selected for "Information addition".

Off: People count information will not be attached to the images. The number of counts will not be displayed on the live images.

On: People count information will be attached to the images, without displaying the number of counts on the live image.

On with i-VMD frame display: People count information will be attached to the images, and the number of counts will be displayed on the live image.

Default: On with i-VMD frame display

**[Heat map]**

Select "On" or "Off" to determine whether to generate heat map information.

On: Counts up both passing and loitering in the shooting area, and saves the heat map infor-

mation and the index images in the internal memory or the SD memory card.

Off: Disable the counting both passing and loitering in the shooting area.

Default: Off

---

**Note:**

- The "Heat map" is not available when "Double panorama", "Panorama", "Quad PTZ", "Single PTZ", or "Quad streams" is selected for "Image capture mode".
  - Fisheye images will be used with the heat map.
  - In the following period, the mapping information and the index images with "Heat map" function will not be saved.
    - First 5 minutes after software is started up, when "Heat map" is enabled.
    - First 5 minutes after changing the setting of "Heat map" from "Off" to "On".
  - To set up the area where no mapping information with "Heat map" to be generated, set up the mask area in the "Detection mode/area" page. In this case, other than mask area setting cannot be set in the "Detection mode/area" page.
- 

**[Destination of the storing information]**

Specifies where to save the number of counts, mapping information, and index images to be generated when "People count" and "Heat map" are enabled.

Internal memory: Saves information in the internal memory of the camera.

SD memory card: Saves information in the SD memory card.

Default: Internal memory

---

**Note**

- The measurement information of [People count] and [Heat map] will be saved in a csv file. For details, refer to "People count, Heat map, MOR (Moving Object Remover) Command Reference" in "IP Camera - CGI Command Document" posted on our support web site, "Download" (For Developer) page.
-

---

**Important:**

- When using an SD memory card, select "Use" for "SD memory card" in the [SD memory card] tab of the [Setup] - [Basic] page.
  - The capacity of the SD memory card shall be 4 GB or more.
  - When using an SD memory card, it is recommended to select "On" for "Overwrite" of "Operating mode" in the [SD memory card] tab of the [Setup] - [Basic] page of the camera. When simultaneously performing recording (audio recording) while selecting "Off" for "Overwrite" is being selected, the measurement information may not be recorded.
- 

**[Interval to store]**

Specifies the counting interval for the number of people and mapping information when "People count" and "Heat map" are enabled.

A file will be generated per counting interval.

15min/ 1 hour/ 12 hours/ 24 hours

Default: 1 hour

---

**Note:**

- The number of counts, mapping information, and index images to be generated with "People count" and "Heat map" functions will be saved based on the UTC time 00:00:30 plus or minus time zone per time of period set with "Interval to store". (The timing of saving may be off a few seconds.)
- The saving period for the number of counts, mapping information, and index images to be generated with "People count" and "Heat map" functions is as follows:
  - When using internal memory: 1 day
  - When using a SD memory card: 92 day\* Actually, data of a longer period than the above retention period will be saved. Period of which superfluous data is saved differs depending on the time zone setting of the camera (up to 23 hours).  
Example) When the set time zone is + 9:00
  - When using internal memory:  
1 day + 9 hours
  - When using a SD memory card:  
92 days + 9 hours
- When saving the number of counts, mapping information, and index images to be generated with "People count" and "Heat map" functions, if the remaining capacity of the SD memory card is not enough, the existing recorded data will be deleted from the old one to make the necessary space.
- When the time setting is changed, data may not be obtained correctly in the period after the change until the next saving time.

Also, when the time is rewound and the end time of the counting is set ahead of starting time, the number of counts, mapping information, and index images will not be generated with "People count" and "Heat map" functions.

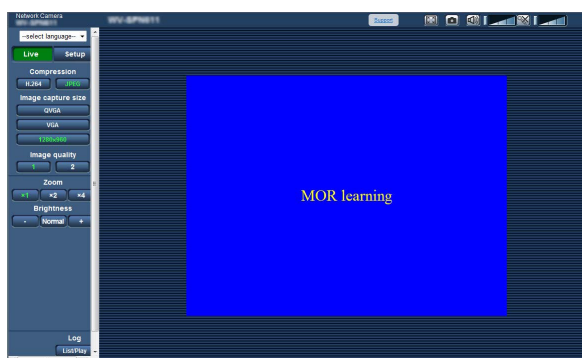
- When it is necessary to change the time, turn off the function first and turn it on after changing the time.
- 

**MOR (Moving Object Remover)**

---

**Note:**

- When "MOR (Moving Object Remover)" is set to "On", the message "MOR learning" will be displayed.



- When the displayed video scene drastically changed, overlapping display will be applied to the changed parts for approx. 5-25 minutes and some black after-image lines may be seen.
- When the privacy mask is set, overlapping display will be applied to the privacy mask areas for approx. 5-25 minutes and some black after-image lines may be seen. It also may take approx. 5-25 minutes to complete application of the privacy mask to MOR (Moving Object Remover) images.
- In order to avoid incorrect clock display or a detection error, it is recommended to select "Off" for "Camera title on screen" and "Time display format" ([Basic] tab of the [Setup] - [Basic] page).
- When "Quad streams" is selected for "Image capture mode", "MOR (Moving Object Remover)" is disabled.
- The frame rate will be limited to 1 fps for the stream to which MOR is applied.

**TYPE3**

- When "H.264" or "JPEG" is set, the streams to be sent by "MOR (Moving Object Remover)" differs as described below according to the setting of the "Image capture mode".

Image capture mode	Streams to be sent by "MOR (Moving Object Remover)"	
	For "H.264"	For "JPEG"
9M Fisheye	H.264(1)	JPEG(1)
4M Fisheye	H.264(1)	JPEG(1)
Double panorama	H.264(1)	JPEG(1)
Panorama	H.264(1)	JPEG(1)
Quad PTZ	H.264(1)	JPEG(1)
Single PTZ	H.264(1)	JPEG(1)
8M Fisheye + Double Panorama	Fisheye: H.264(1) Double panorama: H.264(2)	Double panorama: JPEG(2)
4M Fisheye + Double Panorama	Fisheye: H.264(1) Double panorama: H.264(2)	Double panorama: JPEG(2)
8M Fisheye + Panorama	Fisheye: H.264(1) Panorama: H.264(2)	Panorama: JPEG(2)
4M Fisheye + Panorama	Fisheye: H.264(1) Panorama: H.264(2)	Panorama: JPEG(2)
8M Fisheye + Quad PTZ	Fisheye: H.264(1) Quad PTZ: H.264(2)	Quad PTZ: JPEG(2)
4M Fisheye + Quad PTZ	Fisheye: H.264(1) Quad PTZ: H.264(2)	Quad PTZ: JPEG(2)

TYPE5 | TYPE8

- When "Stream" or "JPEG" is set, the streams to be sent by "MOR (Moving Object Remover)" differs as described below according to the setting of the "Image capture mode".

Image capture mode	Streams to be sent by "MOR (Moving Object Remover)"	
	For "Stream"	For "JPEG"
Fisheye	Stream(1)	JPEG(1)
Double panorama	Stream(1)	JPEG(1)
Panorama	Stream(1)	JPEG(1)
Quad PTZ	Stream(1)	JPEG(1)
Single PTZ	Stream(1)	JPEG(1)
Fisheye + Double Panorama	Fisheye: Stream(1) Double panorama: Stream(2)	Double panorama: JPEG(2)
Fisheye + Panorama	Fisheye: Stream(1) Panorama: Stream(2)	Panorama: JPEG(2)
Fisheye + Quad PTZ	Fisheye: Stream(1) Quad PTZ: Stream(2)	Quad PTZ: JPEG(2)

### [MOR (Moving Object Remover)]

Determine whether to send the H.264 TYPE3 Stream TYPE5 | TYPE8 or JPEG videos from which moving objects are removed.

Off: MOR (Moving Object Remover) will not be applied.

TYPE3

H.264: H.264 video after removing the moving objects will be sent.

TYPE5 | TYPE8

Stream: Stream video after removing the moving objects will be sent.

JPEG: JPEG video after removing the moving objects will be sent.

Default: Off

### [Image type]

Select the image type of the target for the MOR (Moving Object Remover) from "Fisheye", "Panorama", "Double panorama", "Quad PTZ", and "Single PTZ".

Default: Fisheye

#### Note:

- The selectable image type differs depending on the setting of "Image capture mode".

### [Image capture size]

Selects the image capture size of the target for the MOR (Moving Object Remover).

Available sizes differ depending on the setting of "Image capture mode".

TYPE3

Image capture mode	Image capture size
9M Fisheye	1280x1280
4M Fisheye	1280x1280
Double panorama	1920x1080/1280x720
Panorama	1920x1080/1280x720
Quad PTZ	1600x1200/1280x960
Single PTZ	1280x960
8M Fisheye + Double Panorama	Fisheye: 1280x1280 Double panorama: 1280x720
4M Fisheye + Double Panorama	Fisheye: 1280x1280 Double panorama: 1920x1080/ 1280x720
8M Fisheye + Panorama	Fisheye: 1280x1280 Panorama: 1280x720
4M Fisheye + Panorama	Fisheye: 1280x1280 Panorama: 1920x1080/ 1280x720
8M Fisheye + Quad PTZ	Fisheye: 1280x1280 Quad PTZ: 1280x960
4M Fisheye + Quad PTZ	Fisheye: 1280x1280 Quad PTZ: 1280x960

Default: 1280x1280

TYPE5 | TYPE8

Image capture mode	Image capture size
Fisheye	1280x1280
Double panorama	1920x1080/1280x720
Panorama	1920x1080/1280x720
Quad PTZ	1600x1200/1280x960
Single PTZ	1280x960
Fisheye + Double Panorama	Fisheye: 1280x1280 Double panorama: 1280x720
Fisheye + Panorama	Fisheye: 1280x1280 Panorama: 1280x720
Fisheye + Quad PTZ	Fisheye: 1280x1280 Quad PTZ: 1280x960

Default: 1280x1280

---

**[Refresh interval]**

Selects the reflecting speed on the target image of the MOR (Moving Object Remover).

The lower the Level is, more time is required for the object to be displayed on the target image of MOR (Moving Object Remover).

The higher the Level is, less time is required for the object to be displayed on the target image of MOR (Moving Object Remover).

Level 1(Slow)/ Level 2/ Level 3/ Level 4/  
Level 5(Fast)

Default: Level 3

---

**Note:**

- When luminance level is kept about the same, and also there is not much people passing by, the images will be updated in an interval of 5 minutes to 25 minutes according to the level.

---

**[Overlapping display]**

Determine whether to display overlapping the moving part in blue, which is not displayed during transmission by MOR (Moving Object Remover).

On: Enables overlapping display.

Off: Disable overlapping display.

Default: On



## Configure the settings relating to the detection mode/area [Detection mode/area]

Configure the settings relating to the detection conditions (detection programs).

Up to 2 types of detection programs can be configured and saved as "Detection program 1" and "Detection program 2". In addition, up to 8 detection areas and up to 8 mask areas can be specified for each detection program. As the detection type, it is possible to select "Intruder", "Loitering" or "Direction" for each detection area.

### Important:

- When the motion of objects is detected using the i-VMD function, the alarm occurrence indication will be displayed for the alarm status check.
- The indication will also be displayed when a terminal alarm input or command alarm input is received.
- Depending on the network environment, the notification may be delayed even when "Real time" is selected for "Alarm status update mode" on the [Basic] tab of the "Basic" page.
- The i-VMD detection areas may be deviated if the "Image capture mode" setting on the [JPEG/H.264] tab of the "Image/Audio" page is changed after the detection area setting. Be sure to check the i-VMD detection area setting again.
- After setting the i-VMD detection area, if the aspect ratio is changed by editing the setting of [Image capture mode] on the [JPEG/H.264] / [Image/Audio] / [Image] tab page of the [Camera] page, the settings for "Detection mode/area" and "Depth" will automatically be deleted. Make sure to configure the settings for "Detection mode/area" and "Depth" of i-VMD again. **TYPE2** **TYPE3** **TYPE4** **TYPE5** **TYPE6** **TYPE8**
- The i-VMD detection areas may be deviated if the "Extra optical zoom" setting is changed after the detection area setting. Be sure to check the i-VMD detection area setting again.
- i-VMD is not a function to prevent theft or fire. In no event shall i-PRO Co., Ltd. be liable to any party or any person for any accidents or loss.
- Setting up only "Detection program 1" and "Detection program 2" will not complete the alarm function setting. Make sure to set up the schedule in the [Schedule] tab. **TYPE2** **TYPE3** **TYPE4** **TYPE5** **TYPE6** **TYPE8**
- When i-VMD **TYPE4** is used, the image stabilizer or the best-shot function of the extension software is disabled.
- When "On" is selected for "Status" of i-VMD **TYPE4**, the Smart Facial Coding is disabled.



### Step 1

Select the desired detection program from "Detection program".

→ The settings for the selected detection program will be displayed.

#### Note:

- The title will be displayed for "Detection program" if a title has been set for the program. If no title has been set for the program, the default title ("Detection program 1" or "Detection program 2") will be displayed.

### Step 2

When changing the title of the detection program from the default, enter the desired title in the "Detection program title" field.

Available number of characters: 1 - 20 characters  
(A blank will automatically be changed to the default setting.)

Default: "Detection program 1" - "Detection program 2"

### Step 3

Specify the areas to detect the motion of objects using the i-VMD function.

Up to 8 detection areas can be specified.

When the motion of objects is detected in the specified areas, an alarm action will occur.

Select a paint method by clicking "Cross line"


TYPE2  TYPE3  TYPE4  TYPE5  TYPE6  TYPE8,

"Detection area(Quadrangle)" or "Detection area(Polygon)" of "Paint type".


 (Cross line)  TYPE2  TYPE3  TYPE4

TYPE5  TYPE6  TYPE8:

Paints a line for "Cross line".

 (Detection area(Quadrangle)):

Paints a quadrangle detection area.

 (Detection area(Polygon)):

Paints a polygon detection area. (It is possible to designate up to 16 apexes.)

When selecting "Cross line"  TYPE2  TYPE3  TYPE4  TYPE5  TYPE6  TYPE8, set a line by dragging the mouse on the screen.



When selecting "Detection area(Quadrangle)", set a square area by dragging the mouse on the screen.

When selecting "Detection area(Polygon)", set a polygonal area by designating the apexes on the screen. The detection area is painted by connecting start points and end points.

→ The designated area will be set for "1(White)", and a white frame will be displayed. The areas will be set in the order of detection area numbers. The color name beside each detection area number

represents the frame color. In addition, the "Status" for the corresponding frame will automatically be changed to "On".

#### Note:

- To move the line or frame, click the "Paint type" icon  and then drag it with the mouse. In addition, it is possible to change the size (length) or shape\*1 by dragging a corner of the frame or an endpoint of the line.  TYPE2  TYPE3  TYPE4  TYPE5  TYPE6  TYPE8
- \*1 When painted a "Detection area(Polygon)"
- When deleting the detection area, click the  icon of "Paint type", select the frame on the screen by the mouse, and click the [Clear] button.
- If two or more detection areas are overlapped, click the overlapped area by the mouse. The selected frame will be sequentially switched.
- When clicking the [All clear] button, all the frames for the designated detection areas and mask areas will be deleted.
- When setting each detection area, adjust the detection frame so that the bottom center is included in the area.

### Step 4

Select "On" or "Off" to determine whether or not to activate the i-VMD function for the designated detection areas.

On: Activates the i-VMD function.

Off: Does not activate the i-VMD function.

Default: On

When "Off" is selected for "Status" of "Detection Area", the color frame on the deactivated area will be changed to a dotted frame. When "Off" is selected, no alarm will occur even when some change happens in the detection area.

### Step 5

Specify the i-VMD types for the designated detection areas. For the i-VMD type, one of the following detection mode can be selected for each detection area. By configuring two or more detection areas with different detection types, it is possible to activate two or more types of i-VMD function simultaneously.

Intruder: When a moving object enters the detection area that has been set, an alarm occurs.

Loitering: When a moving object enters the detection area that has been set and stays for the specified period, an alarm occurs.

Direction\*2: When a moving object enters the detection area that has been set and moves to the specified direction, an alarm occurs.

\*2 This function is not available for TYPE3, TYPE5, and TYPE8.

Object TYPE2 TYPE3 TYPE4 TYPE5  
TYPE6 TYPE8 :

An alarm will be issued if an object (suspicious object, etc.) is left behind in the set area or taken away from the set area.

Cross line TYPE2 TYPE3 TYPE4 TYPE5  
TYPE6 TYPE8 :

An alarm will be issued if an object moving to the specified direction crossed the set line.


Default: Intruder


### Step 6

By configuring mask areas, it is possible to designate the areas not to activate the i-VMD function. Up to 8 mask areas can be specified.

No moving objects will be detected in the mask areas that have been set.



Select the shape of frame by clicking "Detection area(Quadrangle)" or "Detection area(Polygon)" of "Paint type".

 (Detection area(Quadrangle)): Paints a quadrangle mask area.

 (Detection area(Polygon)): Paints a polygon mask area. (It is possible to designate up to 16 apexes.)

When selecting "Detection area(Quadrangle)", set a square area by dragging the mouse on the screen. When selecting "Detection area(Polygon)", set a polygonal area by designating the apexes on the screen. The mask area is painted by connecting start points and end points.

#### Note:

- To move the line or frame, click the "Paint type" icon  and then drag it with the mouse. In addition, it is possible to change the size (length) or shape\*3 by dragging a corner of the frame or an endpoint of the line. TYPE2 TYPE3 TYPE4  
TYPE5 TYPE6 TYPE8
- \*3 When painted a "Detection area(Polygon)"
- When deleting the mask area, click the  icon of "Paint type", select the frame on the screen by the mouse, and click the [Clear] button. If two or more mask areas are overlapped, click the overlapped area by the mouse. The selected frame will be sequentially switched.
- When clicking the [All clear] button, all the frames for the designated detection areas and mask areas will be deleted.

### Step 7

TYPE1 TYPE2 TYPE4 TYPE6

Select the direction to activate the i-VMD function from "Direction setup". When a moving object enters the detection area that has been set and moves to the specified direction, an alarm occurs. One of the following can be selected for the i-VMD direction. If the direction detection is configured for two or more detection areas, the available direction is common among all the areas.

Up: An alarm occurs when a object moves to the upper direction.

Upper right: An alarm occurs when a object moves to the upper right direction.

Right: An alarm occurs when a object moves to the right direction.

Lower right: An alarm occurs when a object moves to the lower right direction.

Lower: An alarm occurs when a object moves to the lower direction.

Lower left: An alarm occurs when a object moves to the lower left direction.

Left: An alarm occurs when a object moves to the left direction.

Upper left: An alarm occurs when a object moves to the upper left direction.

Default: Left

#### Note:

- A direction can be selected for each area.

TYPE2 TYPE4 TYPE6

TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE8  
Configure "Direction setup" when using "Cross line".

A → B

B → A

A ↔ B

Default: A → B

#### Note:

- When several detection targets cross with each other, the i-VMD function may not be activated or may be falsely activated.  
Use the i-VMD function for places where the crossing of detection target rarely occurs.

### Step 8

Select "On" or "Off" to determine whether or not to activate the scene change detection. The scene change detection will be activated for the entire shooting area. It is impossible to set detection areas or mask areas.

Default: Off

### Step 9

Select the number for the detection program to save the detection conditions configured in Step 1 - 8. Usually, the number for the detection program selected in Step 1 is active. To select the detection program that has been set in Step 1 and save the changed settings as another detection program, select the desired program number.

### Step 10

After the detection condition setting, click the [Set] to save the settings.

When clicking the [Close] button, the changed settings will not be saved and the [i-VMD] tab will be displayed again.

To save the changed settings, click the [Set] button, and then click the [Close] button.

---

#### Note:

- When clicking the [Delete] button, all the settings for the detection program currently displayed will be deleted and reset to the default. The confirmation dialog will be displayed before the settings are deleted. To execute the deletion, click the [OK] button.
- 

After the detection condition setting, configure the depth settings. \*

\* The depth setting is not available for TYPE3, TYPE5, and TYPE8.

## Set the detection depth

Configure the settings relating to the detection depth. The detection depth settings are common between "Detection program 1" and "Detection program 2".

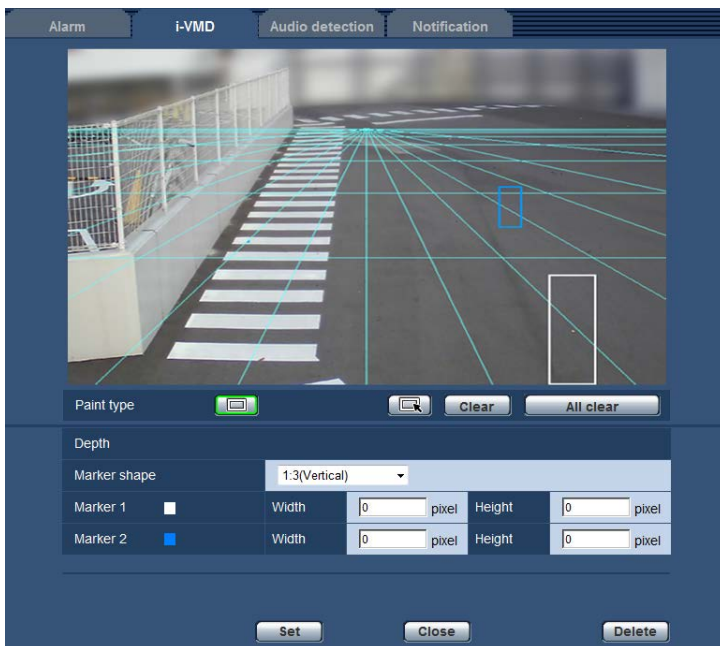
---

### Important:

- If necessary, set up the "Depth". It may control the false alarm occurrence.
- 

### Note:

- The depth setting is not available for TYPE3, TYPE5, and TYPE8.
- 



### Step 1

Click "Depth area(Quadrangle)" of "Paint type" to enable the marker painting. Draw a marker by dragging the mouse between the front side and rear side on the screen.

---

### Note:

- By dragging the mouse up and down, the size of marker will become larger or smaller. (The horizontal to vertical ratio 1:3, 1:1 or 3:1 can be selected from "Marker shape".)
  - When deleting the detection area, click "Depth area(Select)" of "Paint type", select the frame on the screen by the mouse, and click the [Clear] button.
  - When clicking the [All clear] button, all the markers that have been set will be deleted.
  - Assuming that people go forward and backward, draw the larger marker for the nearer object (lower area in the image) and the smaller marker for the farther object (upper area in the image). Either Marker 1 or 2 can be used for the nearer object.
- 

When a marker is drawn, the corresponding width and height will be shown as values. (The values are equal to the numbers of pixels of a VGA screen.) By entering the desired width and height, it is possible to change the size of displayed marker. In this case, the marker display will be refreshed according to the entered values.

---

### Note:

- If the markers are designated as follows, the setting will be invalid. Retry the setting again.
    - When the marker for the nearer object is larger than that for the farther object
    - When the markers for the nearer and farther objects are the same size
    - When the width or height is smaller than the minimum detection size or larger than the maximum detection size
-

## Step 2

After drawing the markers, click the [Set] button.

→ Calculation result is displayed in 3D on the screen and the settings will be saved.

When clicking the [Close] button, the changed settings will not be saved and the [i-VMD] tab will be displayed again.

To save the changed settings, click the [Set] button, and then click the [Close] button.

## Note:

- When clicking the [Delete] button, all the detection depth settings will be deleted and reset to the default.
- The confirmation dialog will be displayed before the settings are deleted. To execute the deletion, click the [OK] button.
- In the default status without the detection depth settings, any objects will be detected regardless of their sizes.
- No object will be detected in the area above the vanishing line (horizon) on the 3D display.

## Set the line for people count [Line]

Specify the lines for people count.



Line number

Number of counts

Line	Status	Direction setup
Line1	Disable	A->B
Line2	Disable	A->B
Line3	Disable	A->B
Line4	Disable	A->B
Line5	Disable	A->B
Line6	Disable	A->B
Line7	Disable	A->B
Line8	Disable	A->B
Line9	Disable	A->B
Line10	Disable	A->B
Line11	Disable	A->B
Line12	Disable	A->B



## Step 1

Specify the line for people count. Set a line by dragging the mouse on the screen. Up to 12 lines can be set.

The lines will be numbered in order. The number will be displayed by the line on the screen. Also, the "Status" for the corresponding line will be automatically changed to "Enable".

---

**Note:**

- To move the line, click the "Paint type" icon  and then drag it with the mouse. Or, the length of the line can be changed by dragging an endpoint of the line.
  - When deleting the lines, click the  icon of "Paint type", select the line on the screen by the mouse, and then click the [Clear] button.
  - When clicking the [All clear] button, all the lines that have been set will be deleted.
- 

**Step 2**

Set "Enable" or "Disable" for "Status" to specify whether to perform people count for each line.

Enable: Enables the people count function.

Disable: Disables the people count function.

Default: Enable

When "Disable" is selected for "Status" of the line, the line will turn to a dotted line.

When "Disable" is set, the people count will not be performed.

**Step 3**

Specify "Direction setup" for people count.

A → B

B → A

A ↔ B

Default: A → B

**Step 4**

After the setting, click the [Set] button to save the settings.

When clicking the [Close] button, the changed settings will not be saved and the [i-VMD] tab will be displayed again.

To save the changed settings, click the [Set] button, and then click the [Close] button.

---

**Note:**

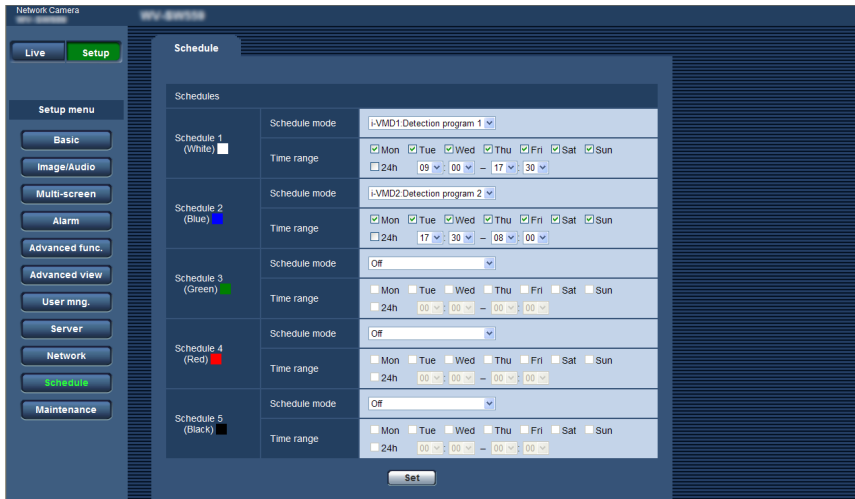
- When clicking the [Delete] button, all the settings will be deleted and reset to the default. The confirmation dialog will be displayed before the settings are deleted. To execute the deletion, click the [OK] button.
-

## Set the i-VMD schedule [Schedule]

It is possible to configure the i-VMD schedule settings on the "Schedule" page.

This manual only describes the schedule settings for the i-VMD function.

For further information about the basic settings for the schedule, refer to the operating instructions of the cameras in use.



It is possible to select the schedule mode and detection program from "Schedule mode". Either of the following schedule modes is available.

i-VMD1: Activates the i-VMD function for "Detection program 1" according to the designated schedule.

i-VMD2: Activates the i-VMD function for "Detection program 2" according to the designated schedule.

### Note:

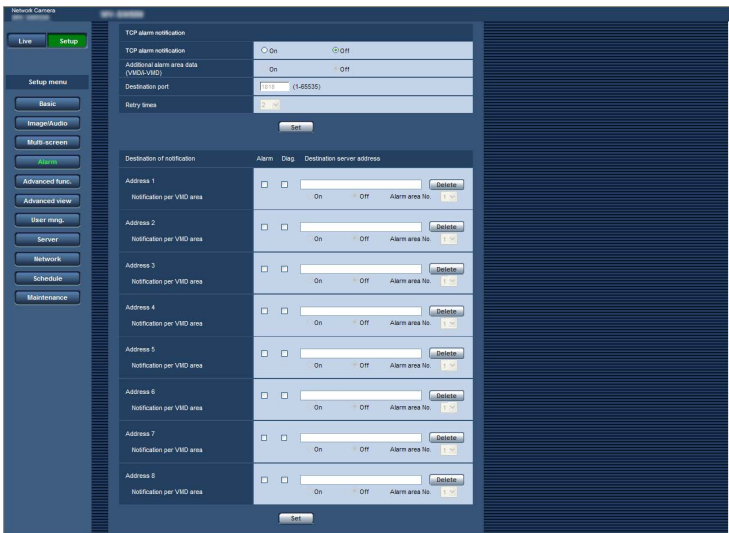
- To enable "i-VMD1" or "i-VMD2", select "i-VMD" for "VMD function type" on the [Alarm] tab of the "Alarm" page.  
\* The indication is "Function type" for TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 cameras.
- The i-VMD action that is set on the "Schedule" page is available only when "Schedule" is selected for "i-VMD program" on the [i-VMD] tab. In other cases, the i-VMD function will be activated based on the conditions set for "Detection program 1" or "Detection program 2". (When "Off" is selected, the i-VMD function will be deactivated.) **TYPE1**
- The i-VMD alarm function of the TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 camera cannot be used only by installing the extension software. To enable the i-VMD alarm function of the TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8 camera, make sure to set up the i-VMD schedule in the "Schedule" page.
- The schedule cannot be set for [People count], [Heat map], and [MOR (Moving Object Remover)]. **TYPE3**  
**TYPE5** **TYPE8**



# Configure the settings relating to TCP alarm notification [TCP alarm notification]

This manual only describes the On/Off of the extensive alarm information.

For further information about the basic settings for the TCP alarm notification, refer to the operating instructions of the cameras in use.



## TCP alarm notification

[Additional alarm area data (VMD/i-VMD)] TYPE1

[Additional alarm data] TYPE2 TYPE3 TYPE4

TYPE5 TYPE6 TYPE8

Select "On" or "Off" to determine whether or not to notify the detected i-VMD type using the extension command format of the TCP alarm notification.

Off: Does not notify the detected i-VMD type. The conventional basic format will be used.

On: Notifies the detected i-VMD type. The extension command format will be used.

Default: Off

---

### Note:

- "Notification per VMD area" of "Destination of notification" is unavailable when the i-VMD function is enabled.
-

# Configure the advanced settings relating to the i-VMD function [Advanced settings]

The settings relating to the detection sensitivity, detection time and detection size can be configured on this page.

It is impossible to display the page from the setup menu.

Enter the following URL on the web browser.

http://(the IP address of the camera)/admin/setup\_ivmd\_detail.html

## Important:

- Depending on the advanced settings, the detection accuracy may become lower. Check the images carefully on the "Live" page.

## Detection sensitivity

### [Detection sensitivity]

Select the detection sensitivity setting for the intruder detection.

The greater the value is, the higher the detection sensitivity becomes. The setting is common among all the detection programs, areas and detection types.

1 (Low), 2, 3, 4 (Middle), 5, 6, 7 (High)

Default: 4 (Middle) TYPE1 TYPE3 TYPE5 TYPE8  
5 TYPE2 TYPE4 TYPE6

### [Detection sensitivity (Object)] TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE8

Select the detection sensitivity setting for the object detection.

Low, Middle, High

Default: Middle

### [Scene change detection level] TYPE1

### [Detection sensitivity (Scene change)]

TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE8

Select the detection sensitivity setting for the scene change detection.

The greater the value is, the higher the detection sensitivity becomes.

The setting is common among all the detection programs.

1 (Low), 2 (Middle), 3, 4, 5 (High) TYPE1

1 (Low), 2, 3, 4 (Middle), 5 (High) TYPE2 TYPE3

TYPE4 TYPE5 TYPE6 TYPE8

Default: 2 (Middle) TYPE1

4 (Middle) TYPE2 TYPE3 TYPE4 TYPE5

TYPE6 TYPE8

## Detection time

### Note:

- Depending on the status of the detecting object, it may take more time than the specified detection time for alarms to be activated.

### [Intruder detection time]

Select the time to issue an alarm since an object is detected in the intruder detection area.

0.2 s / 0.4 s / 1 s / 2 s / 3 s / 4 s / 5 s / 10 s \*

\* "3 s" and "4 s" are available only for TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8.

Default: 2 s

**[Loitering detection time]**

Select the time to issue an alarm since an object stays in the loitering detection area.

10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min

Default: 10 s

**[Direction detection time]\*1**

Select the time to issue an alarm since an object moves to the specified direction in the direction detection area.

1 s/ 2 s/ 3 s/ 4 s/ 5 s/ 10 s \*2

\*2 "3 s" and "4 s" are available only for TYPE2, TYPE4, and TYPE6.

Default: 2 s

\*1 This function is not available for TYPE3, TYPE5, and TYPE8.

**[Object detection time]** TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE8

Select a wait time for the object detection alarm that is a period of time from a moment when an object is left behind in the detection area or taken away from the detection area to a moment when an alarm is to be issued.

10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min

Default: 30 s

**[Scene change detection time]**

Select the time to issue an alarm since the entire scene is changed when the scene change detection is enabled.

1 s/ 2 s/ 3 s/ 4 s/ 5 s/ 10 s \*3

\*3 "3 s" and "4 s" are available only for TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, and TYPE8.

Default: 2 s TYPE1

3 s TYPE2 TYPE3 TYPE4 TYPE5 TYPE6 TYPE8

**Detection size\*4**

**[Min. size]**

Select the minimum size of objects to be detected. Determine the area ratio to the reference size (the size of an object based on the depth settings).

10 %/ 20 %/ 30 %/ 40 %/ 50 %/ 60 %/ 70 %/ 80 %/ 90 %

Default: 30 % TYPE1

50 % TYPE2 TYPE4 TYPE6

**[Max. size]**

Select the maximum size of objects to be detected. Determine the area ratio to the reference size (the size of an object based on the depth settings).

100 %/ 150 %/ 200 %/ 250 %/ 300 %/ 350 %/ 400 %/ 450 %/ 500 %/ Unlimited \*5

\*5 "350 %", "400 %", "450 %", "500 %" and "Unlimited" are available only for TYPE2, TYPE4, and TYPE6.

Default: 300 %

\*4 The detection size cannot be specified with TYPE3, TYPE5, and TYPE8.

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