



Web Guide

i-VMD

Contents

1	Introduction	1
	1.1 Product Overview	1
	1.2 Features	1
	1.2.1 i-VMD	1
	1.3 Before using this product	2
2	Preparation	5
3	Basic settings	6
	3.1 Open the setting menu	6
	3.2 Select the operation	7
	3.3 Area Setting	8
	3.3.1 Alarm notification area	9
	3.3.2 Drawing area (for setting the detection areas)	10
	3.3.3 Detection condition setting	11
	3.3.4 Area setting procedure	13
	3.4 Detailed setting (if necessary)	13
	3.4.1 Time setting	14
	3.4.2 Depth	14
	3.4.3 Motion detection threshold	17
	3.4.4 i-VMD information added	17
	3.5 Schedule setting	18
	3.6 Alarm setting	18
4	Operation	20
5	Others	22
	5.1 PC environment required	22
	5.2 For trademarks and registered trademarks	22
	5.3 Open Source Software	22

5.4 Copyright 35

5.5 Disclaimer 35

Figure Table Contents

Figure Contents

a: alarm notification area, b: drawing area, and c: detection condition setting	9
a: camera image screen, b: Paint type	10
Example of Depth Setting	16
a: Locus, b: detection frame, c: alarm notification	20
1: CROSS LINE (CROSS LINE), 2: INTRUDER (INTRUDER), 3: LOITERING (LOITERING), 4: DIRECTION (DIRECTION)	20

1 Introduction

This manual explains the settings required before starting operation of i-VMD (hereinafter referred to as "this product"), as well as how to operate it during operation. When using this product, be sure to also read the instruction manual for your camera. Also, some of the setting screens shown in this manual may differ depending on the model of your camera and the version of i-PRO Configuration Tool (hereinafter referred to as "iCT") you are using.

1.1 Product Overview

This product is a function that allows you to use the camera more conveniently. By setting it up, you can use the following functions.

- Activate an alarm with the i-VMD function that automatically determine the detected moving bodies.

1.2 Features

1.2.1 i-VMD

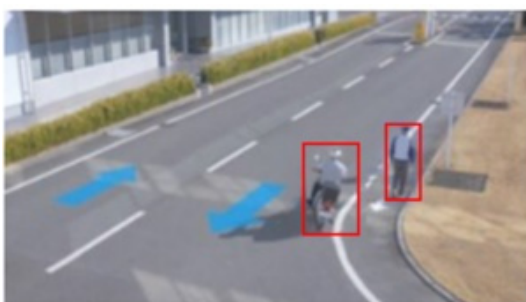
- i-VMD can detect moving bodies in the four modes below and then alarms occur.
 - INTRUDER: Detects if moving bodies intrude into the predetermined area
 - LOITERING: Detects if moving bodies loiter in the predetermined area beyond the fixed time.
 - DIRECTION: Detects if moving bodies move in the direction you specified within the predetermined area.
 - CROSS LINE: Detects if moving bodies cross the predetermined line in the direction you

specified.

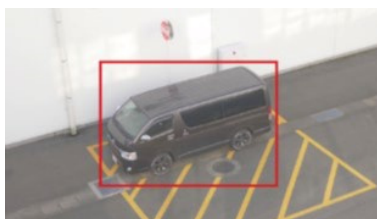
Below are examples of each detection.



INTRUDER: An alarm occurs when moving bodies are detected intruding into the predetermined area.



DIRECTION: An alarm is generated when the movement of a moving object in the specified direction is detected in the specified area.



LOITERING: Detects a moving object remaining within a set area and generates an alarm.



CROSS LINE: Alarm is generated by detecting that the set line has exceeded the specified line.

1.3 Before using this product

The following cases may cause difficulty in detecting a subject or motion, or cause lost or false alarms or reduce measurement accuracy.

- There is no difference in brightness between the background and moving subject.
- Image brightness is low, such as at night.

- The subject moves too fast or too slowly.
- The subject is too small or too large.
- Light conditions, such as outdoors and windows, are easily changed.
- External light such as sunlight and car headlights enters.
- Fluorescent light flickers.
- The dome of the camera is stained with water droplets.
- The subject moves straight toward the camera.
- Too many moving objects.
- The camera is swinging.
- The weather is extremely bad.
- Shadows fall into the Detection area.
- The subject is out of focus.
- The subject is blurred.
- The subject is moving toward or away from the camera at the periphery of the image.
- Only a part of the subject is hidden in the privacy zone or other subject. (Reference: Less than two-thirds of vehicles are visible.)
- Too many subjects. (Guideline: Accuracy may deteriorate if the number exceeds 40 (units).)
- Multiple subjects intersect.
- Strong external light is inserted to create a subject and other shadows.
- Illumination fluctuates when the lamp is turned on or off.
- Light conditions, such as near windows, are subject to change.
- Animals and insects are seen.

Other cautions are explained below.

- If the camera [Data Encryption] is on, the camera image may not be displayed on the camera image screen or demonstration screen.
- If there are false detection factors in the screen, such as trees shaking, roadway (passing by automobile), or water surface (reflected light), you can reduce false detection by setting the mask area.

Refer to the following page for the mask area settings.

→[3.3 Area Setting](#)

- When setting the i-VMD, check the operation during daytime and nighttime after setting the area according to the installation status of the cameras and the expected movement of the subject.

Refer to the following pages for area settings.

→[3.3 Area Setting](#)

- If the camera's image angle changes after turning on the power, after changing the camera settings, the camera may detect incorrectly for approximately 1 minute.
- The alarm is repeatedly activated every specified time while the target is on the screen. Thus, e-mails and proprietary alarms are also notified at intervals (see [Alarm deactivation time] on the [Alarm] tabs in the Camera Settings window).
- The message ID (Decimal number) of TCP alarm notification is "50" for Intruder alarm, "51" for Loitering alarm, "52" for Direction alarm, "56" for Cross line alarm.
- i-PRO Co., Ltd. shall not be responsible for any inconveniences, losses, or damages caused by the settings of i-VMD or as a result thereof.
- i-VMD is not for preventing theft, disaster, etc. i-PRO Co., Ltd. shall not bear any liabilities whatsoever for any accidents or losses.

2 Preparation

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

- ① Configure the required settings.
 - 3 [Basic settings](#)
- ② Start of operation
 - 4 [Operation](#)

3 Basic settings

The procedure for configuring Basic settings is as follows.

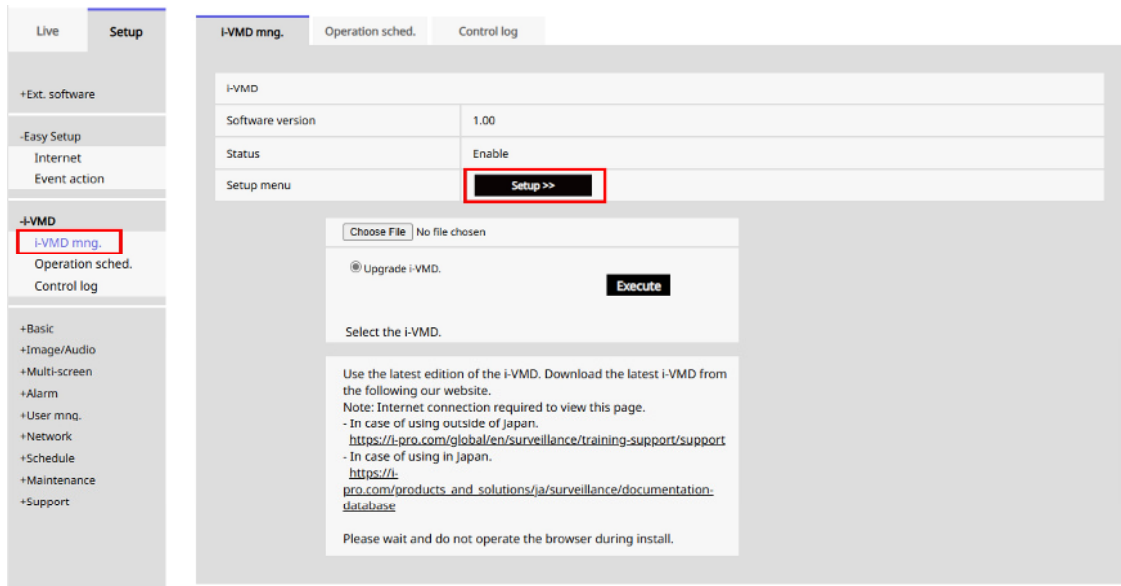
1. Open the setting menu
→[3.1 Open the setting menu](#)
2. Select the operation
→[3.2 Select the operation](#)
3. Set the i-VMD
→[3.3 Area Setting](#)
4. If you want to set the i-VMD detection sensitivity, detection duration, and size of the human you want to detect:
Make detailed settings
→[3.4 Detailed setting \(if necessary\)](#)
5. Set a schedule
→[3.5 Schedule setting](#)
6. Set an alarm
→[3.6 Alarm setting](#)

3.1 Open the setting menu

The i-VMD menu is displayed on the camera's [Setup] menu > [i-VMD] page > [i-VMD mng] tab. Clicking the [Setup>>] button will take you to the [i-VMD settings screen].

3 Basic settings

3.2 Select the operation



3.2 Select the operation

The [i-VMD setting screen] has five setting screens: [1.Operation selection], [2.Area setting], [3.Detailed setting], [4.Schedule setting], and [5.Alarm setting].



If you do not perform [1.Operation Selection], you will not be able to perform the settings from [2.Area Settings] onwards.



Status	Enable
i-VMD	<input checked="" type="radio"/> On <input type="radio"/> Off

Set

Status

Displays the status of i-VMD.

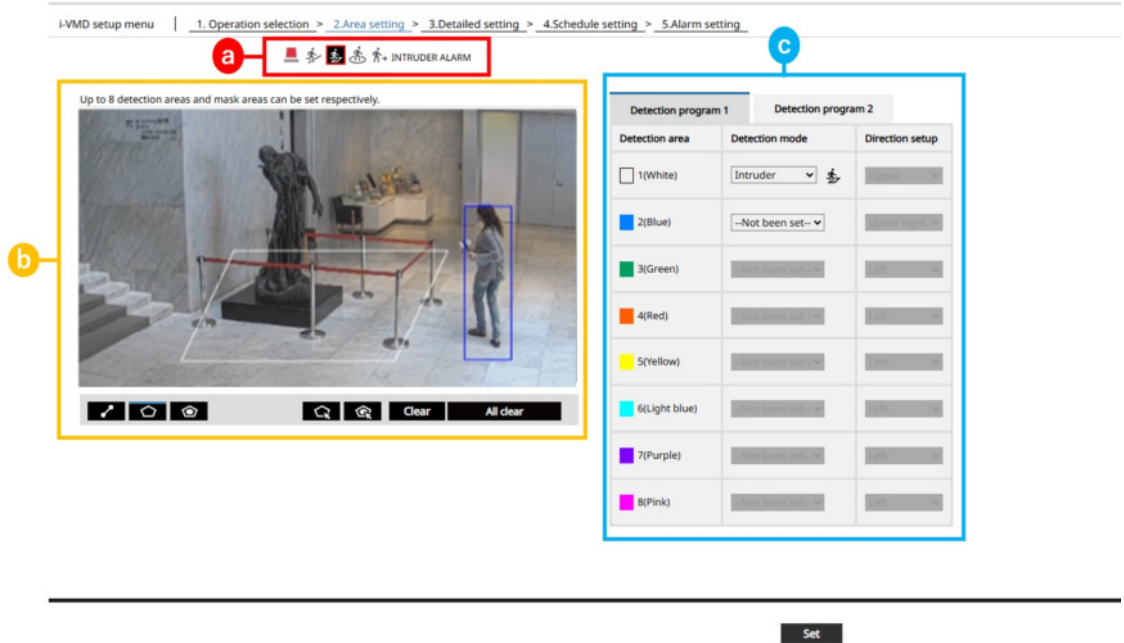
If it is running, it will display [Enable], and if it is stopped, it will display [Disable]. Set [i-VMD] to [On] to start operation, or [Off] to stop operation.

i-VMD

Select the operation of i-VMD. You can choose [On] or [Off].

3.3 Area Setting

Set the areas and detection conditions for detecting moving objects using i-VMD. Select intrusion detection, loitering detection, or direction detection as the detection mode for each detection area. Up to eight detection areas and eight mask areas can be set for each setting. Up to two combinations of areas and detection conditions can be set and saved as [Detection Setting 1] and [Detection Setting 2].



a: alarm notification area, b: drawing area, and c: detection condition setting

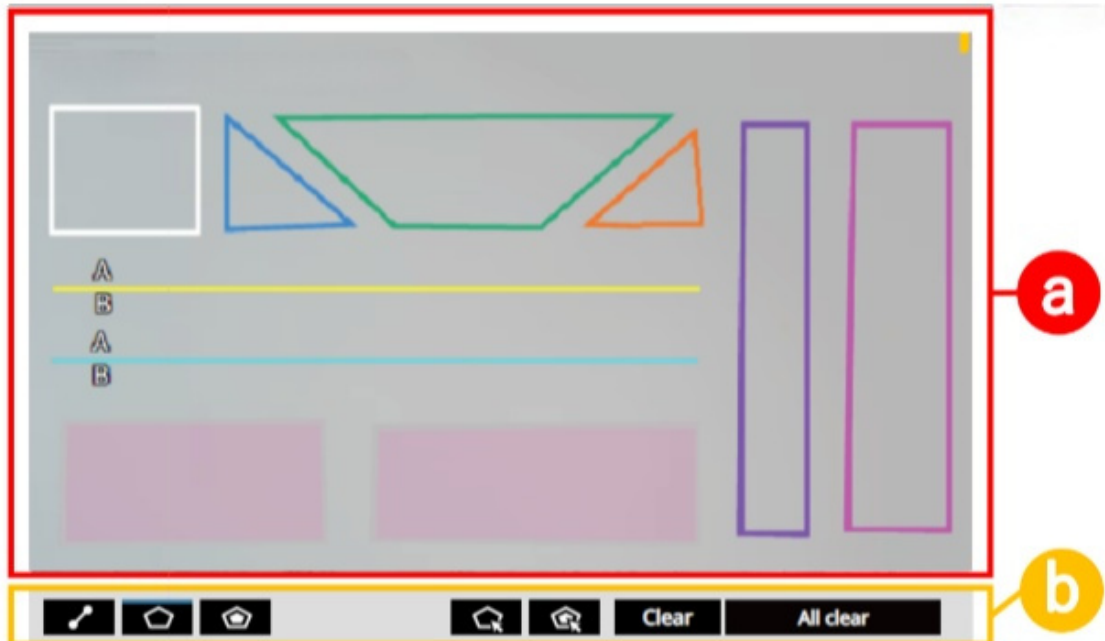
3.3.1 Alarm notification area

When i-VMD detects moving bodies, the alarm icon and the icons for the four detection modes turn on. Click the alarm icon to clear the alarm state and turn off all the icons.



- 1 Alarm ICON
- 2 CROSS LINE
- 3 INTRUDER
- 4 LOITERING
- 5 DIRECTION

3.3.2 Drawing area (for setting the detection areas)



a: camera image screen, b: Paint type

Camera image screen

This window draws the detection area or detection lines.

To draw, select the [Detection area (polygon)] or [CROSS LINE] icons you want to draw from the [Paint type] and drag them to the [Camera video screen].

An alarm is generated when the actuator is identified within the Detection area set by drawing.

An alarm is generated when the movement traverses the set detection line.

Paint type

Click the icon to select the drawing format.



1. Cross line (Setting): Draws detection lines for CROSS LINE.
2. Detection area (Setting): Draws Detection area as a polygon (up to 16 sides).
3. Mask Area (Setting): Draws the mask area as a polygon (up to 16 sides).
4. Detection area (Select): Select the drawn Detection area.
5. Mask Area (Select): Select the drawn mask area.

6. Delete: Deletes the selected Detection area (line) and mask areas.
7. All Delete: Deletes all drawn Detection area (line) and mask areas.



- When you draw a Detection area or Mask area, you complete the area setting by selecting the start point at the end.
- The Detection area, detection line, and mask area selected in the Detection area (Select), Mask Area (Select) can be changed in size, length, and shape by dragging the corners and end points of the frames. You can also move by dragging the inside of the frame or the line.
- To delete a Detection area or detection line, when several Detection area or detection lines overlap, left-click the mouse in the overlapping area to switch the selected frames in turn.
- The center under the detection frame is the position of the detection frame. Set Detection area so that the position of this detection frame is Detection area. Refer to the following pages for the detection frame.
→4 [Operation](#)
- Multiple Detection area, detection lines, and mask areas cannot be selected at the same time.
- By default, the entire drawing area is set to Detection area.
- If you change the [Image capture mode] [Image rotation] in the [Setup] menu of the camera, the Detection area and mask area settings return to the default settings.
- The mask area is the same in [detection program 1] and [detection program 2].

3.3.3 Detection condition setting

Detection program 1 and Detection program 2

Select the [Detection program 1] and [Detection program 2] tabs to set one or two detection criteria.

The two conditions can be executed simultaneously or separately, depending on the scheduling. See the following pages for schedule settings.

→3.5 [Schedule setting](#)



- In the initial setting of the schedule, Detection program 1 and Detection program 2 are always valid
- When using i-PRO Active Guard, only alarms generated by Detection program 1 will be notified as events.

Detection area

Up to eight Detection area and detection lines are distinguished by line colors.

The colors of drawing lines are set in order from [1 (White)].

Detection mode

Select the detection modes for the set Detection area and detection lines.

INTRUDER: Detects that moving bodies have intruded the detection area.

LOITERING: Detects that moving bodies have loitered in the detection area for the fixed time.

DIRECTION: Detects that moving bodies have moved in the direction you specified within the detection area.

CROSS LINE: Detects that moving bodies have crossed the detection line in the direction you specified.

Default setting: INTRUDER

Direction setup

If Detection mode is [DIRECTION] or [CROSS LINE], set the detection orientation.

For [DIRECTION], you can choose from the following eight directions:

Upper: Detected when moving upward.

Upper right: Detected when moving in the upper right direction.

Right: Detected when moving in the right direction.

Lower right: Detected when moving in the lower right direction.

Lower: Detected when moving downward.

Lower left: Detected when moving in the lower left direction.

Left: Detected when moving to the left.

Upper left: Detected when moving in the upper left direction.

Default setting: Left

For [CROSS LINE], select from the following three directions.

A→B: Detected when moving from A to B.

B→A: Detected when moving from B to A.

A↔B: Detected when moving from A to B or from B to A.

Default setting: B→A

[Set] buttons

Click to save the contents of the currently displayed area settings tab.

3.3.4 Area setting procedure

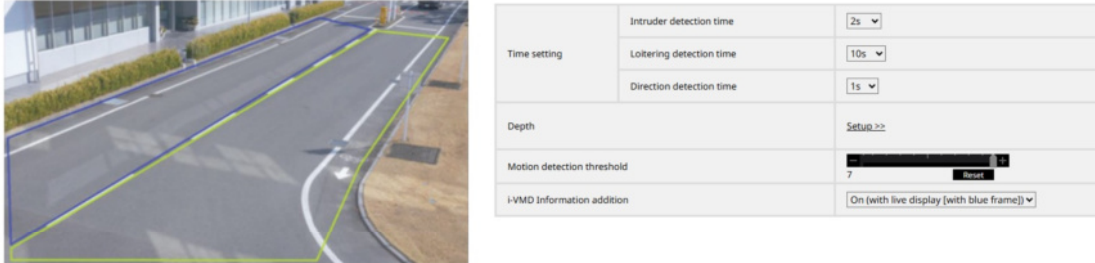
1. Make sure the [Area Setting] screen is selected.
2. Ensure that the [Detection program 1] tabs are selected.
3. Draw an area for detection (hereinafter referred to as "Detection area") in the drawing area. Draw a location (hereinafter referred to as the mask area) that you do not want to detect in the Detection area.
Eight Detection area and eight mask armatures can be set respectively.
4. Configure four Detection mode for each Detection area: INTRUDER, LOITERING, DIRECTION and CROSS LINE, respectively.
5. If Detection mode is [DIRECTION] or [CROSS LINE], configure [Direction setup].
6. Save the [Detection program 1] detection condition by clicking [Setup].
7. Select the [Detection program 2] tabs and save the [Detection program 2] detection criteria in steps (3) to (6).

3.4 Detailed setting (if necessary)

Set the i-VMD detection threshold, detection time, size of the moving object you want to detect, etc. Click [3.Detailed setting] at the top of the screen to open the [Detailed setting] screen.

i-VMD setup menu | 1.Operation selection > 2.Area setting > 3.Detailed setting > 4.Schedule setting > 5.Alarm setting

表示



Time setting	Intruder detection time	2s
	Loitering detection time	10s
	Direction detection time	1s
Depth	Setup >>	
Motion detection threshold	7	Reset
i-VMD Information addition	On (with live display (with blue frame))	

Set Setting data initialization

[Set] button

Click to save the contents of the advanced tab currently displayed.

[Setting data initialization] button

Clicking this button initializes all i-VMD settings.

3.4.1 Time setting

Sets the time from detection to alarm generation.

[Intruder detection time]

Sets the time from the detection of intrusion to the alarm generation.

0.2s, 0.4s, 1s, 2s, 3s, 4s, 5s, 10s

Default setting: 2s

[Loitering detection time]

Sets the time from the detection of stagnation until the alarm is generated.

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

Default setting: 10s



Make sure that the detection frame continues to be displayed stably within the set time.

[Direction detection time]

Sets the time until the object continues to move in the specified direction and the alarm is generated.

1s, 2s, 3s, 4s, 5s, 10s

Default setting: 1s



Depending on the movement of the object, the time until the alarm is generated may be longer than the setting.

3.4.2 Depth

Set the depth. The depth setting is common to both Detection program 1 and Detection program 2.

By setting the depth, you can specify the size of the moving object to be detected and reduce false alarms.

Click [Setup >>] to display [Depth setting] screen.

3 Basic settings

3.4 Detailed setting (if necessary)

Depth setting

Select the depth setting to On or OFF.

On :Set the depth to the camera manually.





Off:The depth is not set.

Default setting: Off



•When it is often impossible to detect a human by setting it to [On], you may be able to detect it by selecting [Off].

3.4.2.1 When [Depth setting] is [On]

Depth setting		On ▾	
Marker shape		1:3(Vertical) ▾	
Marker 1		Photographic subject size	Width <input type="text" value="0"/> pixel
			Height <input type="text" value="0"/> pixel
Clear			
Marker 2		Photographic subject size	Width <input type="text" value="0"/> pixel
			Height <input type="text" value="0"/> pixel
Clear			
Size setting			
Max. size		300 ▾ %	
Min. size		50 ▾ %	

■ Marker Shape

1:1 (Square)、1:3 (Vertical)、3:1 (Horizontal)、None

Default setting: 1:3 (Vertical)

■ Setting procedure

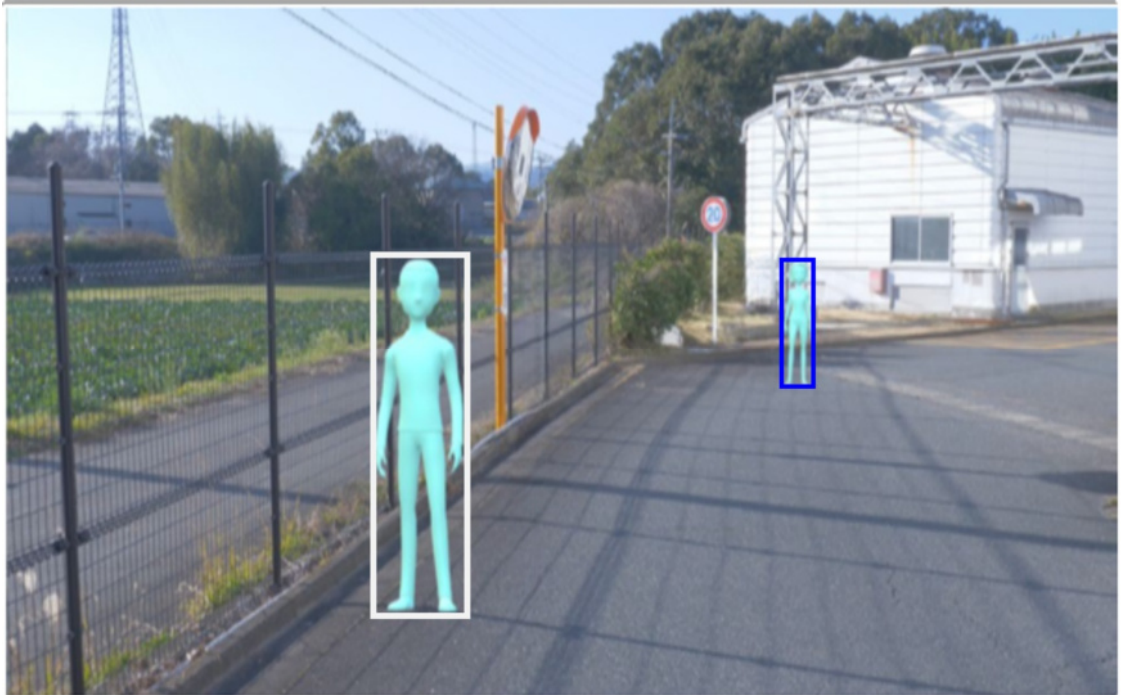
Draw Marker 1 and Marker 2 in two places in the drawing area.

The subject size will be automatically entered as you draw.

3 Basic settings

3.4 Detailed setting (if necessary)

Click the [Clear] button to erase the drawn markers.



Example of Depth Setting



- Draw the marker in the drawing area at two distances: the front and the back. If the two markers are close, the depth may not be set correctly.

Size setting

When the depth setting is enabled, only the moving objects detected with sizes between the maximum and the minimum sizes trigger alarms.

Set the maximum size and the minimum size based on a subject with a total length of 160 cm (63 inches) as the standard size (100%).

Max. size

Set the maximum size of the moving object to be detected.

100%, 150%, 200%, 250%, 300%, Unlimited

Default setting: 300%

Min. size

Set the minimum size of the moving object to be detected.

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

Default setting: 50%



The following shows a setting example for detecting humans between 48 cm and 240 cm in height as alarm triggers.

e.g. Marker shape: 1:3 (Vertical), Min. size: 30% (160×30%), Max. size: 150% (160×150%)

3.4.3 Motion detection threshold

[Motion detection threshold]

Set the detection threshold for the movement of the object you want to detect.

The smaller the value, the easier it will be to detect, but the more likely it will be to make a false detection.

1, 2, 3, 4, 5, 6, 7

Default setting: 4

3.4.4 i-VMD information added

[i-VMD information addition]

You can set whether to add i-VMD data (detection frame) to video data or to display detection frame and Locus in live video of web browser. When set to [On (with live display [with blue frame])], a blue frame is displayed when a movement is detected in the screen. When the detected motion enters the Detection area and an alarm is generated, the frame color turns red. The Locus of the detected moving object is indicated by a green line. Displays the Locus for the most recent 3 seconds.

The setting of adding i-VMD data does not affect the alarm operation.

Off: i-VMD does not add data. Also, the detection frame and Locus are not displayed.

On: Adds i-VMD data, but does not display detection frame or Locus.

On(with live display):

Adds i-VMD information and displays detection frame and Locus information. The blue frame is not displayed.

On(with live display [with blue frame]):

Adds i-VMD data and displays detection frame and Locus. In addition to the red frame, the blue frame is also displayed.

Default setting: On (with live display)

3.5 Schedule setting

The initial schedule settings for i-VMD are set to always enable detection settings 1 and 2. To change the operation schedule, use the settings screen on the camera itself. For details, refer to the camera's instruction manual.

i-VMD setup menu | 1.Operation selection > 2.Area setting > 3.Detailed setting > 4.Schedule setting > 5.Alarm setting

多 画 画 示



To perform the detailed settings for schedule, perform the settings on the setup menu of the camera. At the default, schedules of both "Detection setting 1" and "Detection setting 2" are active for 24 hours.

3.6 Alarm setting

Refer to the operation manual of the camera for the basic TCP alarm notification settings and other alarm settings.

Clicking [5. Alarm setting] at the top of the window opens the [Alarm Settings] window.

报警区域



Camera action on alarm	
Alarm E-mail notification	E-mail notification setup >>
Alarm image FTP/SFTP transmission	FTP/SFTP setup >>
Alarm image recording(SD memory card)	SD memory card setup >>
TCP alarm notification	TCP alarm notification setup >>
HTTP alarm notification	HTTP alarm notification setup >>

Set

Alarm E-mail notification

[E-mail notification setup]

Click to display the mail setting screen of the camera.

Alarm image FTP/SFTP transmission

[FTP/SFTP setup]

Click to display the FTP/SFTP setting screen of the camera.

Alarm image recording(SD memory card)

[SD memory card setup]

Click this button to display the SD Memory Card setting screen on the camera.

TCP alarm notification

[TCP alarm notification setup]

Clicking this button displays the TCP alarm notification settings window for the camera.

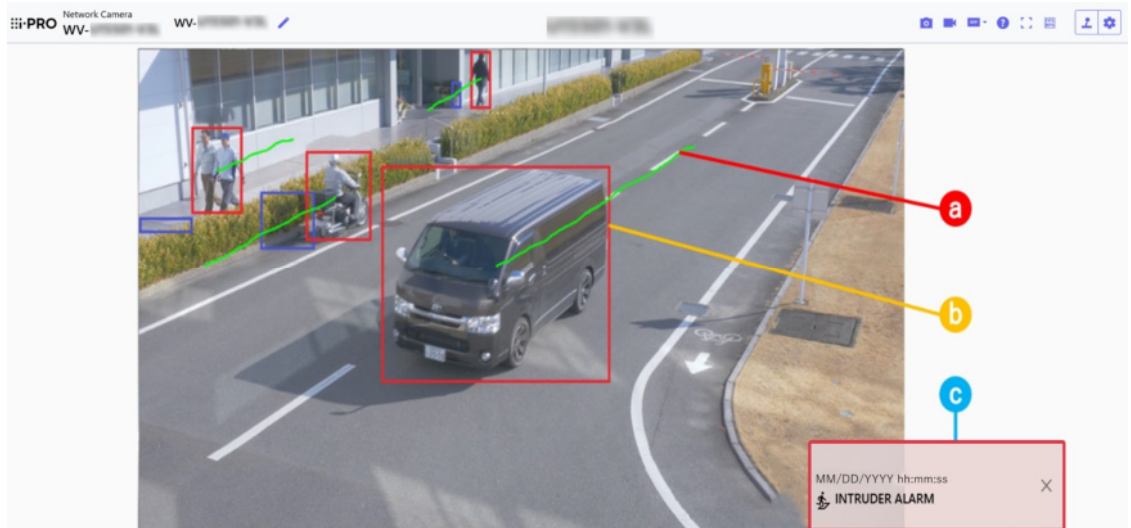
HTTP alarm notification

[HTTP alarm notification setup]

Clicking this button displays the HTTP alarm notification settings window for the camera.

4 Operation

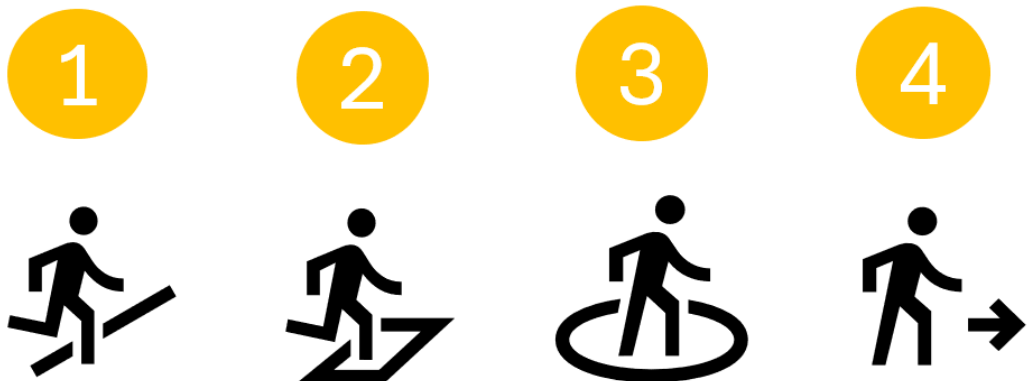
When the required settings are completed, open the camera's web browser to display the image and start operation.



a: Locus, b: detection frame, c: alarm notification

Alarm notification

When i-VMD detects a moving object, an alarm notification will be displayed.



1: CROSS LINE (CROSS LINE), 2: INTRUDER (INTRUDER), 3: LOITERING (LOITERING), 4: DIRECTION (DIRECTION)

When alarm notification is clicked while alarm is generated, all alarms are reset.



Alarm is also notified when an alarm input is received with a terminal alarm or when a command alarm is received.

Detection frame (red frame, blue frame)

When a motion is detected, this motion is displayed in a blue frame. When the detected movement enters the Detection area and an alarm is generated, this movement is displayed in a red frame. "i-VMD Information addition" can be set to ON/OFF.

Locus

The Locus where the alarm frame (red frame) moves is displayed in green.

Displays the Locus for the most recent 3 seconds.

Displayed when the alarm frame (red frame) is set to be displayed in the "i-VMD Information addition" and "Additional information type" settings.



- If you configure the i-VMD Detection area and then change the [Image/Audio]-[Image capture mode] or [Basic]-[Image rotation] in the Camera Settings menu, the Detection area, mask area and depth may be misaligned or initialized. If the [Image capture mode] or [Image rotation] is changed, check the Detection area and mask area settings and the depth settings again.
- If you change the zoom settings after you configure the Detection area for i-VMD, the Detection area and mask area may be misaligned. If you change the zoom settings, check the Detection area, mask area, and depth settings again.

5 Others

5.1 PC environment required

For information about the PC environment, requirements, and supported browsers used for settings, refer to the camera's instruction manual.

5.2 For trademarks and registered trademarks

- Google Maps are trademarks or registered trademarks of Google LLC.
- Screen photographs are used according to the guidelines of Microsoft Corporation.

5.3 Open Source Software

This product uses the following open source software. Refer to the following Open Source Software for the corresponding license statement.

Software name	License Name
OpenCV	License Agreement For Open Source Computer Vision Library (3-clause BSD License)
Cwebsocket	The MIT License
libjpeg-turbo	The IJG (Independent JPEG Group) License The Modified (3-clause) BSD License The zlib License
Eigen	MPL-2.0
heatmap.js	The MIT License

Open Source Software

License Agreement

For Open Source Computer Vision Library (3-clause BSD License)

By downloading, copying, installing or using the software you agree to this license.

If you do not agree to this license, do not download, install, copy or use the software.

License Agreement

For Open Source Computer Vision Library (3-clause BSD License)

Copyright (C) 2000–2020, Intel Corporation, all rights reserved.

Copyright (C) 2009–2011, Willow Garage Inc., all rights reserved.

Copyright (C) 2009–2016, NVIDIA Corporation, all rights reserved.

Copyright (C) 2010–2013, Advanced Micro Devices, Inc., all rights reserved.

Copyright (C) 2015–2016, OpenCV Foundation, all rights reserved.

Copyright (C) 2015–2016, Itseez Inc., all rights reserved.

Copyright (C) 2019–2020, Xperience AI, all rights reserved.

Third party copyrights are property of their respective owners.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- * Neither the names of the copyright holders nor the names of the contributors may be used to endorse or promote products derived from this software without specific prior written permission.

This software is provided by the copyright holders and contributors "as is" and any express or implied warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. In no event shall copyright holders or contributors be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software, even if advised of the possibility of such damage.

The MIT License

The MIT License (MIT)

Copyright (c) 2015 Andrew Putilov

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER

IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

libjpeg-turbo Licenses

libjpeg-turbo is covered by three compatible BSD-style open source licenses:

The IJG (Independent JPEG Group) License, which is listed in [README.ijg](#)

This license applies to the libjpeg API library and associated programs (any code inherited from libjpeg, and any modifications to that code.)

The Modified (3-clause) BSD License

Copyright (C)2009–2023 D. R. Commander. All Rights Reserved.

Copyright (C)2015 Viktor Szathmáry. All Rights Reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the libjpeg-turbo Project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS", AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING

NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

MPL-2.0

Mozilla Public License Version 2.0

=====

1. Definitions

1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

1.3. "Contribution"

means Covered Software of a particular Contributor.

1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

1.5. "Incompatible With Secondary Licenses"

means

- (a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or
- (b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

1.6. "Executable Form"

means any form of the work other than Source Code Form.

1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

1.8. "License"

means this document.

1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.

1.10. "Modifications"

means any of the following:

- (a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or
- (b) any new file in Source Code Form that contains any Covered Software.

1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its Contributor Version.

1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

1.13. "Source Code Form"

means the form of the work preferred for making modifications.

1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. License Grants and Conditions

2.1. Grants

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

- (a) under intellectual property rights (other than patent or trademark) Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and
- (b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

2.2. Effective Date

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.

2.3. Limitations on Grant Scope

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License.

Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

- (a) for any code that a Contributor has removed from Covered Software; or
- (b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or
- (c) under Patent Claims infringed by Covered Software in the absence of its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if

permitted under the terms of Section 3.3).

2.5. Representation

Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

3. Responsibilities

3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the Source Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

3.2. Distribution of Executable Form

If You distribute Covered Software in Executable Form then:

- (a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and
- (b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

3.3. Distribution of a Larger Work

You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for

the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

3.4. Notices

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Termination

5.1. The rights granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

*

* 6. Disclaimer of Warranty

* -----

*

* Covered Software is provided under this License on an "as is"
* basis, without warranty of any kind, either expressed, implied, or
* statutory, including, without limitation, warranties that the
* Covered Software is free of defects, merchantable, fit for a
* particular purpose or non-infringing. The entire risk as to the
* quality and performance of the Covered Software is with You.

* Should any Covered Software prove defective in any respect, You
* (not any Contributor) assume the cost of any necessary servicing,
* repair, or correction. This disclaimer of warranty constitutes an
* essential part of this License. No use of any Covered Software is
* authorized under this License except under this disclaimer.

*

*

* 7. Limitation of Liability

* -----

*

* Under no circumstances and under no legal theory, whether tort
* (including negligence), contract, or otherwise, shall any
* Contributor, or anyone who distributes Covered Software as
* permitted above, be liable to You for any direct, indirect,
* special, incidental, or consequential damages of any character
* including, without limitation, damages for lost profits, loss of
* goodwill, work stoppage, computer failure or malfunction, or any
* and all other commercial damages or losses, even if such party
* shall have been informed of the possibility of such damages. This
* limitation of liability shall not apply to liability for death or
* personal injury resulting from such party's negligence to the
* extent applicable law prohibits such limitation. Some
* jurisdictions do not allow the exclusion or limitation of
* incidental or consequential damages, so this exclusion and
* limitation may not apply to You.

*

8. Litigation

Any litigation relating to this License may be brought only in the
courts of a jurisdiction where the defendant maintains its principal
place of business and such litigation shall be governed by laws of that
jurisdiction, without reference to its conflict-of-law provisions.

Nothing in this Section shall prevent a party's ability to bring

cross-claims or counter-claims.

9. Miscellaneous

This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

10. Versions of the License

10.1. New Versions

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

10.3. Modified Versions

If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses

If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

Exhibit A – Source Code Form License Notice

This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this

file, You can obtain one at <https://mozilla.org/MPL/2.0/>.

If it is not possible or desirable to put the notice in a particular file, then You may include the notice in a location (such as a LICENSE file in a relevant directory) where a recipient would be likely to look for such a notice.

You may add additional accurate notices of copyright ownership.

Exhibit B – “Incompatible With Secondary Licenses” Notice

This Source Code Form is “Incompatible With Secondary Licenses”, as defined by the Mozilla Public License, v. 2.0.

The MIT Lisence

Copyright (c) 2015 Patrick Wied

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the “Software”), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

5.4 Copyright

Transfer, copying, disassembly, decompilation, and reverse engineering of the software contained in this product are prohibited. In addition, any act of export that violates the export laws and regulations of all software included in this product is prohibited.

5.5 Disclaimer

- The purpose of this product is to obtain images for monitoring specific areas. This product alone is not intended to prevent crimes.
- In no event shall we be liable for the following:
 - ① Any incidental, special or consequential damages or damages arising directly or indirectly in connection with the Goods
 - ② Any inconvenience, damage, or damage incurred due to the inability of an image to be displayed or recorded or the loss of recorded information due to any reason including a failure or failure of the Product
 - ③ Failure or inconvenience, damage, or damage caused by a system combined with a third party device
 - ④ Claims or claims for damages caused by infringement of privacy by an individual or organization that has become the subject of a picture as a result of the use of surveillance images and records made public for some reason (including use with the User Authentication Off).
 - ⑤ The stored information is lost for some reason (including when the Product is initialized due to forgetting the authentication information such as user name and password)