

# Inclination (YAW) angle adjustment method in multi-sensor cameras WV-X8571N / WV-S8531N

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Panasonic i-PRO Sensing Solutions Co., Ltd.

This document describes how to display the inclined objects on the images horizontally by adjusting the inclination (YAW) angle in the below multi-sensor cameras, using sample images from a camera installed on the wall.

Applicable model: WV-X8571N / WV-S8531N

Optional brackets for wall mounting:

- Wall mount bracket WV-QWL501-W (i-PRO white)
- Mount Bracket WV-QSR502A-W (i-PRO white)

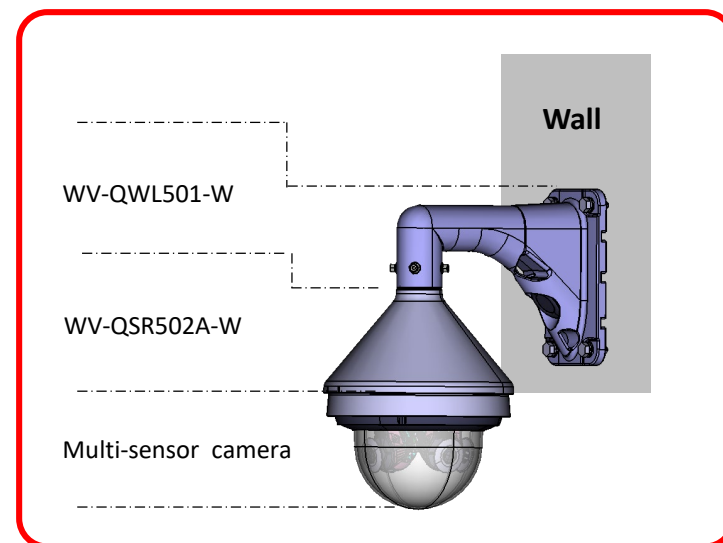


Figure 1: Camera installation condition

Read the following manuals carefully before installation:

- Installation Guide
- Additional Information “How to adjust the angle of view”

Those manuals can be downloaded at:

[https://security.panasonic.com/training\\_support/documentation\\_database/](https://security.panasonic.com/training_support/documentation_database/)

Installation condition of WV-X8571N / WV-S8531N :

1. Cam.1, 2 and 3 are arranged horizontally / Camera 4 is tilted downward (horizontal + downward layout)
2. Installation height of the camera is 3 meter
3. The camera is installed as shown in Figure 1 on page 1

## Before inclination (YAW) angle adjustment

- The target object (road in this example) is tilted in Cam.1 and Cam.3 images **as shown in the below red lines**.

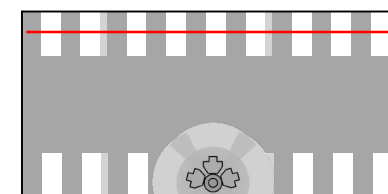
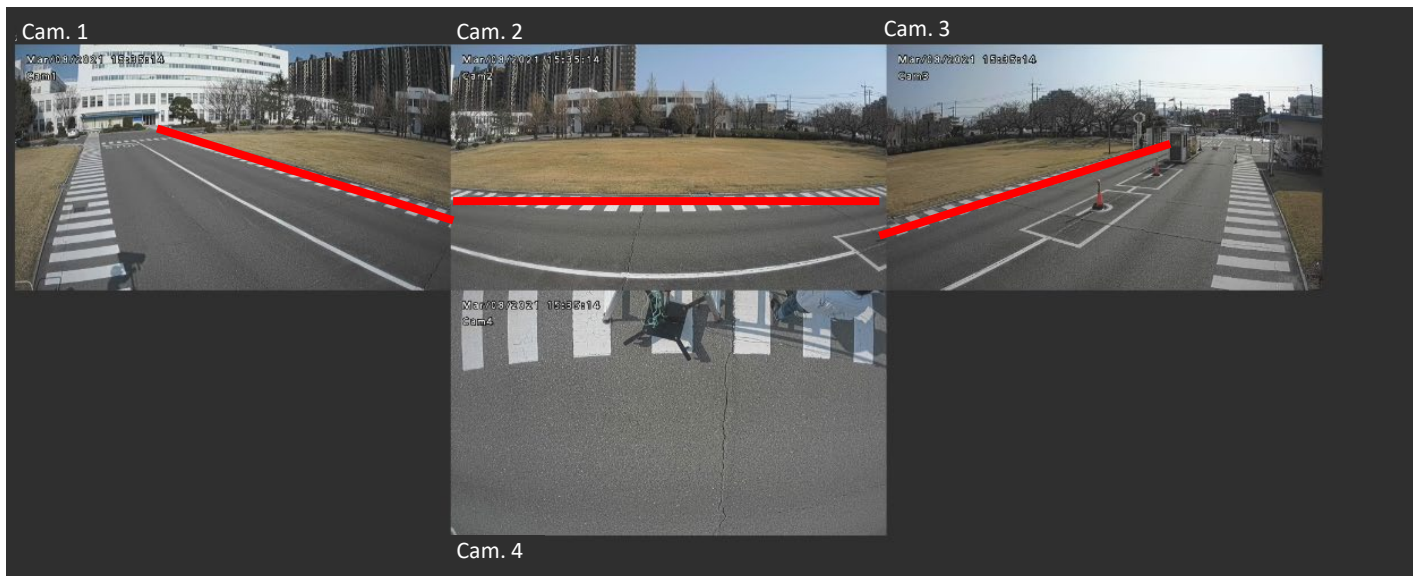
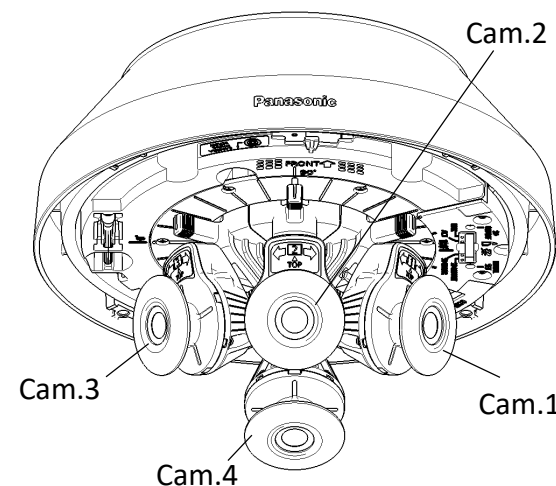


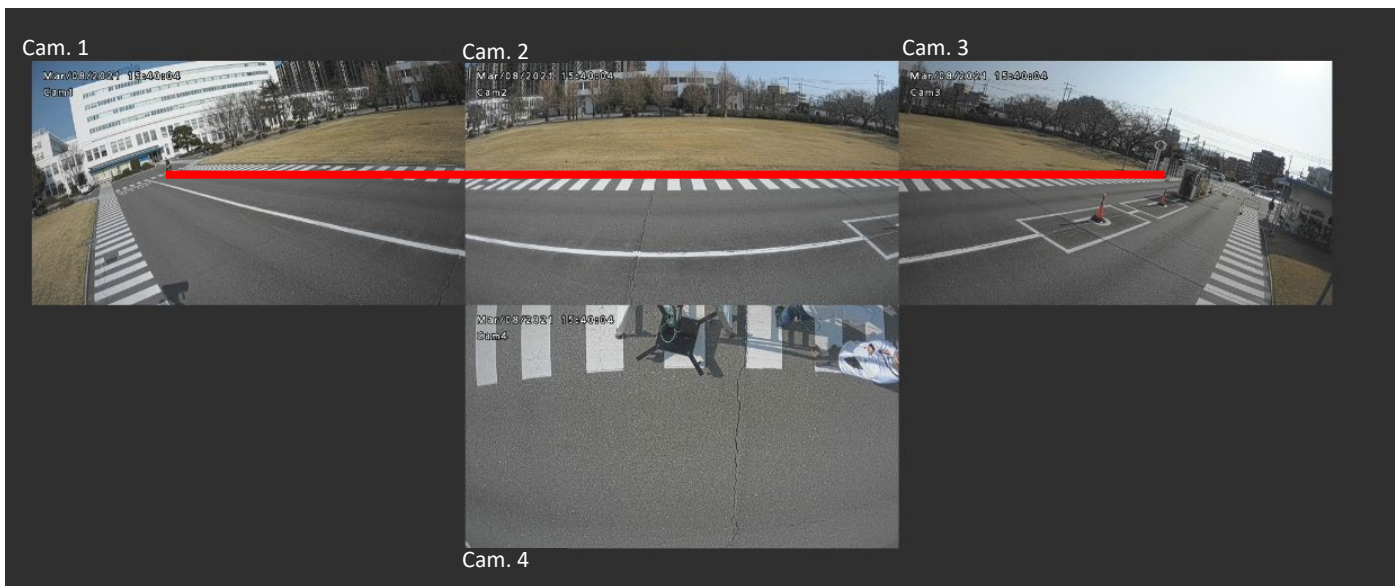
Image of the target object (road)

Installation condition of WV-X8571N / WV-S8531N :

1. Cam.1, 2 and 3 are arranged horizontally / Camera 4 is tilted downward (horizontal + downward layout)
2. Installation height of the camera is 3 meter
3. The camera is installed as shown in Figure 1 on page 1

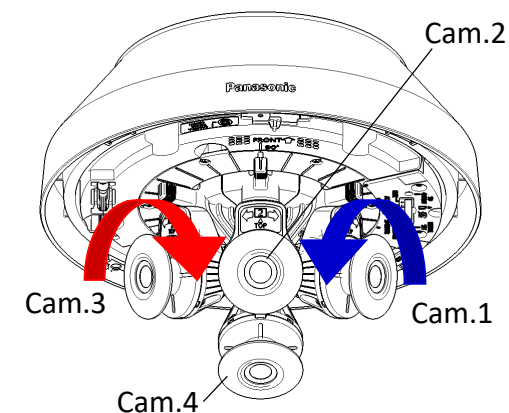
## After inclination (YAW) angle adjustment

- The target object (road in this example) above the center of the screen can be displayed horizontally **as shown in the below red line.**



## How to adjust the inclination (YAW) angle:

- Rotate Cam.1 and Cam.3 in the direction of below arrows.



## TILT/YAW angle adjustment - Reference chart

Pattern	Cam. 2		Cam. 1, 3		Cam. 4	
	TILT angle*1 (degree/ notch count)	YAW angle (degree)	TILT angle*1 (degree/ notch count)	YAW angle*2 (degree/ notch count)	TILT angle*3 (degree/ notch count)	YAW angle (degree)
1	80 deg. / 0 notch	0 deg.	80 deg. / 0 notch	-10 deg. / 4 notch	-15 deg. / 0 notch	0 deg.
2	75 deg. / 2 notch	0 deg.	80 deg. / 0 notch	-12.5 deg. / 5 notch	-15 deg. / 0 notch	0 deg.
3	70 deg. / 4 notch	0 deg.	80 deg. / 0 notch	-15 deg. / 6 notch	-15 deg. / 0 notch	0 deg.
4	65 deg. / 6 notch	0 deg.	80 deg. / 0 notch	-17.5 deg. / 7 notch	-15 deg. / 0 notch	0 deg.
5	60 deg. / 8 notch	0 deg.	77.5 deg. / 1 notch	-22.5 deg. / 9 notch	-15 deg. / 0 notch	0 deg.
6	55 deg. / 10 notch	0 deg.	77.5 deg. / 1 notch	-27.5 deg. / 11 notch	-12.5 deg. / 1 notch	0 deg.
7	50 deg. / 12 notch	0 deg.	77.5 deg. / 1 notch	-32.5 deg. / 13 notch	-7.5 deg. / 3 notch	0 deg.
8	45 deg. / 14 notch	0 deg.	75 deg. / 2 notch	-37.5 deg. / 15 notch	-5 deg. / 4 notch	0 deg.
9	40 deg. / 16 notch	0 deg.	75 deg. / 2 notch	-40 deg. / 16 notch	-2.5 deg. / 5 notch	0 deg.
10	35 deg. / 18 notch	0 deg.	75 deg. / 2 notch	-42.5 deg. / 17 notch	0 deg. / 6 notch	0 deg.
11	30 deg. / 20 notch	0 deg.	75 deg. / 2 notch	-47.5 deg. / 19 notch	5 deg. / 8 notch	0 deg.

Note: One notch is 2.5 degree for both TILT and YAW. A camera clicks every one notch as a guide.

Refer to the Additional Information “How to adjust the angle of view” for details.

\*1 When the TILT end at horizontal position is 0-notch

\*2 When the vertical position of YAW is 0-notch

\*3 When the TILT end at downward position is 0-notch

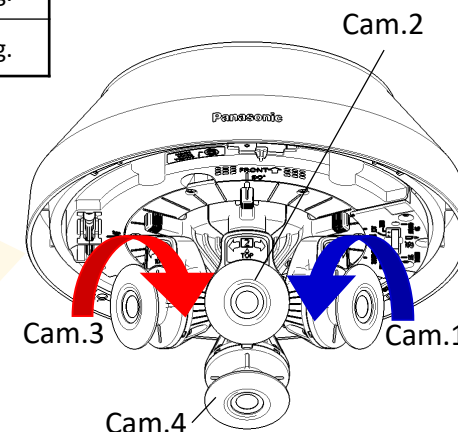
Rotate cameras in the direction of arrows referring to the chart above.



YAW Clockwise rotation: + side

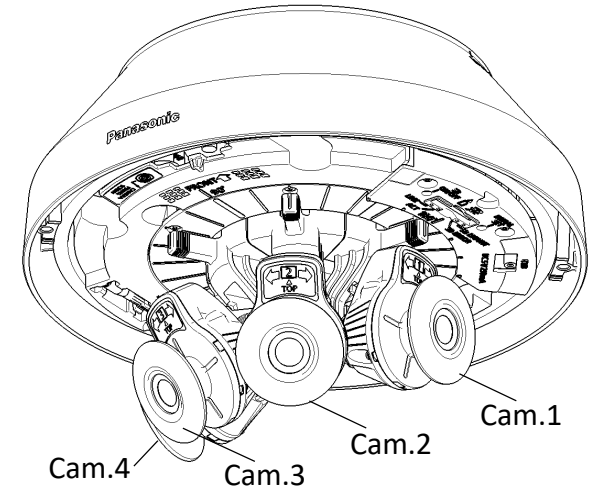


YAW Counterclockwise rotation: -side



Installation condition of WV-X8571N / WV-S8531N :

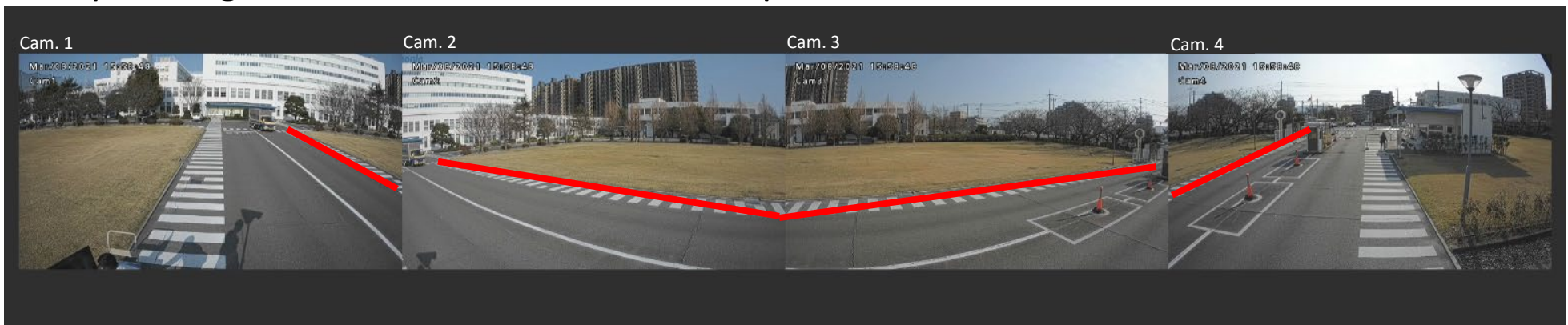
1. Cam.1, 2, 3 and 4 are arranged horizontally (horizontal layout)
2. Installation height of the camera is 3 meter
3. The camera is installed as shown in Figure 1 on page 1



## Before inclination (YAW) angle adjustment

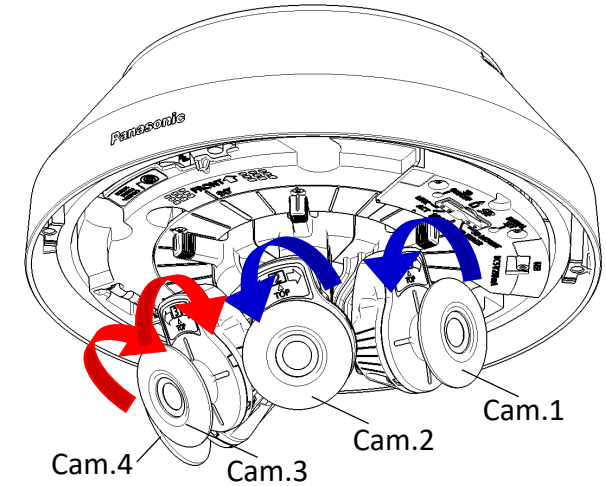
- The target object (road in this example) is tilted in all images from Cam.1 to Cam.4 **as shown in the below red lines.**

Sample image when Cam.1, 2, 3, and 4 are placed close to each other.



Installation condition of WV-X8571N / WV-S8531N :

1. Cam.1, 2, 3 and 4 are arranged horizontally (horizontal layout)
2. Installation height of the camera is 3 meter
3. The camera is installed as shown in Figure 1 on page 1



## After inclination (YAW) angle adjustment

- The target object (road in this example) in the upper 30% of the screen can be displayed horizontally **as shown in a red line.**

### How to adjust the inclination (YAW) angle:

- Rotate all cameras from Cam.1 to Cam.4 in the direction of the arrows in the right figure.



## TILT/YAW angle adjustment - Reference chart

	Cam. 2, 3	Cam. 2	Cam. 3	Cam. 1, 4	Cam. 1	Cam. 4
Pattern	TILT angle*1 (degree / notch count)	YAW angle*2 (degree / notch count)	YAW angle (degree)	TILT angle*1 (degree / notch count)	YAW angle (degree / notch count)	YAW angle (degree)
1	80 deg. / 0 notch	0 deg. / 0 notch	0 deg.	80 deg. / 0 notch	-7.5 deg. / 3 notch	7.5 deg.
2	75 deg. / 2 notch	-2.5 deg. / 1 notch	2.5 deg.	80 deg. / 0 notch	-10 deg. / 4 notch	10 deg.
3	70 deg. / 4 notch	-5 deg. / 2 notch	5 deg.	80 deg. / 0 notch	-12.5 deg. / 5 notch	12.5 deg.
4	65 deg. / 6 notch	-7.5 deg. / 3 notch	7.5 deg.	80 deg. / 0 notch	-15 deg. / 6 notch	15 deg.
5	60 deg. / 4 notch	-10 deg. / 4 notch	10 deg.	80 deg. / 0 notch	-17.5 deg. / 7 notch	17.5 deg.

Note: One notch is 2.5 degree for both TILT and YAW. A camera clicks every one notch as a guide.

Refer to the Additional Information “How to adjust the angle of view” for details.

\*1 When the TILT end at horizontal position is 0-notch

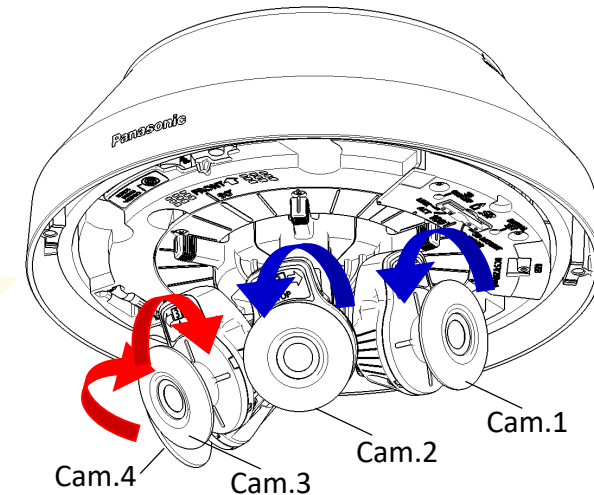
\*2 When the vertical position of YAW is 0-notch

Rotate cameras in the direction of arrows referring to the chart above.



YAW Clockwise rotation: + side

YAW Counterclockwise rotation: -side





 i-PRO