



3-series

Fixed Dome Network Cameras

WV-SFV311A / WV-SFV310A

WV-SFR311A / WV-SFR310A

WV-SFN311A / WV-SFN310A

Security Systems Business Division

Panasonic System Networks Co., Ltd.

The Panasonic logo, consisting of the word "Panasonic" in a white, sans-serif font on a dark blue rectangular background.



Outdoor vandal resistant

WV-SFV311A (D/N (IR))

WV-SFV310A (D/N (Electrical))



Indoor vandal resistant

WV-SFR311A (D/N (IR))

WV-SFR310A (D/N (Electrical))



Indoor

WV-SFN311A (D/N (IR))

WV-SFN310A (D/N (Electrical))

Super Dynamic Fixed Dome Network camera

- ✓ 133dB Wide Dynamic Range and 0.01 lux High Sensitivity for color images
- ✓ HD 720p at up to 60fps
- ✓ IP-Network friendly
- ✓ Intelligent VMD (i-VMD)
- ✓ Tough design and flexible installation

133dB Wide Dynamic Range

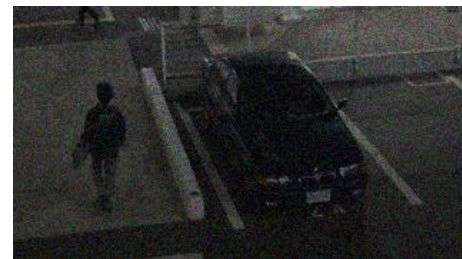
Even a single scene includes complex lighting conditions such as bright light, the dark of night, high contrast scenes and backlight situations. Incorporating Enhanced Super Dynamic of 133dB wide dynamic range, new 3-series cameras enable clear and easy identification in high contrast scenes and backlight situations.



Entrance in a backlight situation

0.01 lux High Sensitivity for color images

The latest image sensor technology combined with Multi process Noise Reduction (MNR) and [Frequency Divided Filter \(FDF\)](#) results in a high sensitivity of 0.01 lux in clearer color images than ever before. 3-series cameras deliver clear color images even with minimum ambient light like a quarter moon.



Low lighting scene

HD 720p at up to 60fps

Combining HD 720p high resolution and 60fps high frame rate, 3-series cameras capture rapid moving objects such as people moving chips and cards in casino, bill in the bank and a vehicle plate on the road.



Roulette table

Enhanced Super Dynamic

delivers a wide dynamic range of 133dB. With new variable exposure and shutter speed control, Enhanced Super Dynamic captures multiple images with optimal short and long exposures. Enhanced Super Dynamic combines them into one frame and results in clear images.



Without Enhanced Super Dynamic

With Enhanced Super Dynamic

High sensitivity image sensor with 3DMNR enables easy identification, capturing color images with low noise in low light conditions.

3D-MNR: 3D Multi process Noise Reduction.



Previous model

3-series camera

Frequency Divided Filter (FDF)

divides the images into multiple frequency ranges, removes the fine noise generated under low illumination for achieving a low bit rate without eliminating edge components.

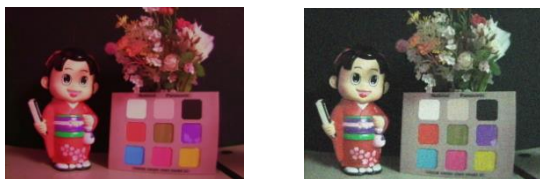


Without FDF

With FDF

Super Chroma compensation

(SCC) recovers the colors of objects, when built-in IR cut filter is removed to enhance light-sensitivity in low light conditions.



Without SCC

With SCC

Fog compensation

improves video quality in difficult weather conditions such as fog, sandstorms and more.

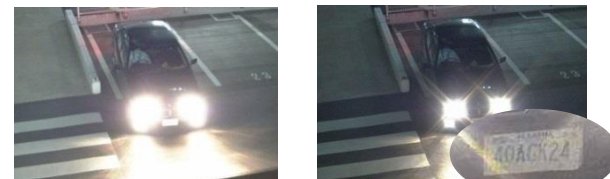


Without fog compensation

With fog compensation

High Light Compensation (HLC)

produces clear images, reducing the effect from strong lights such as headlight glare.

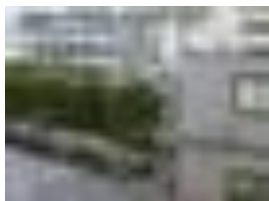


Without HLC

With HLC

Auto Back Focus (ABF)

keeps fine focus, controlling precise image sensor position automatically. It streamlines installation and maintenance works.



Before ABF



After ABF

Adaptive Black Stretch (ABS)

enables clear identification of people and objects in the dark areas by compensating the signal level automatically.



Without ABS



With ABS

Wide range built-in IR LED

with active LED control enables easy and clear identification in low light condition, illuminating broad area evenly with infrared (IR) light. (WV-SFN311L)



Wide illuminated range

Lens Distortion Compensation (LDC) removes barrel distortion from images caused by wide angle lens.



Without LDC



With LDC

Face Super Dynamic

enables clear identification of a person's face, detecting a facial part in the picture and performing Super Dynamic automatically.



Without Face Super Dynamic



With Face Super Dynamic

Variable Image Quality on Specified area (VIQS) saves the network bandwidth and recorder disk space, capturing clear images of region of interest with higher image quality.

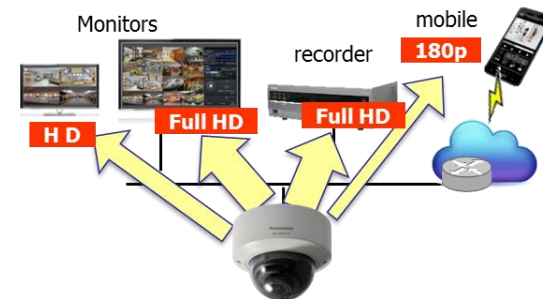


Lower image quality

Higher image quality to region of interest

Appropriate-sized video stream

Monitors, recorders, smartphones and remote sites like branches have different requirements for image quality and network bandwidth. 3-series cameras save the network bandwidth, sending out multiple H.264 and JPEG streams sized appropriately for each device requirement.



Higher H.264 compression

With powerful UniPhier system LSI, 3-series cameras save the network bandwidth and the recorder disk space, keeping high image quality.

Cameras	WV-SF/SW3xx	3-series
HD at 30fps	4 Mbps	2 Mbps (-50%)
HD at 10fps	3 Mbps	1 Mbps (-66%)

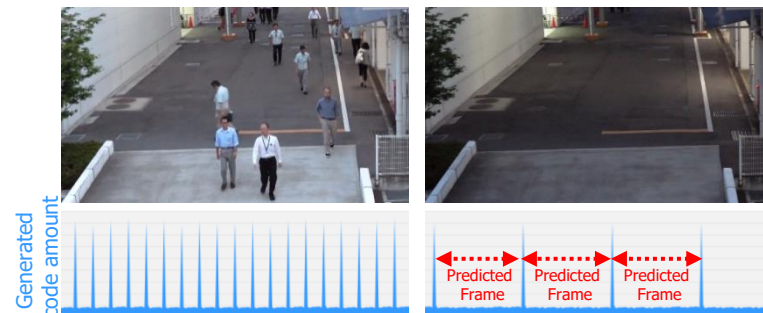
(frame rate priority mode)

Smart coding Technology

Group of Picture (GOP) control removes unnecessary information from the frame for realizing efficient encoding.

With the latest bitrate reducing technology, GOP control, 3D-MNR and FDF, 3 series camera saves the network bandwidth and the recorder disk space.

Scene	Without GOP	With GOP
Heavy traffic of people	3 Mbps	3 Mbps
Minimal traffic of people	2 Mbps	1 Mbps(-50%)



When people are walking, I-frame is inserted at regular intervals as usual.

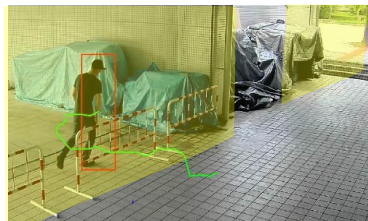
When there is no person walking, I-frames are thinned down to reduce the amount of data.

Intelligent VMD (Optional)

With the latest intelligent Video Motion Detection (i-VMD) technology, 3-series cameras improve the efficiency and effectiveness of surveillance. The evolved self-learning algorithm and powerful UniPhier system LSI results in the high detection rate with less false alerts.

Intruder detection

detects people or cars trespassing in restricted areas.



Loitering detection

detects people who has loitered for too long in the area.



Direction detection

detects people or cars that go the wrong direction.



Scene change detection

detects tampering with the camera view.



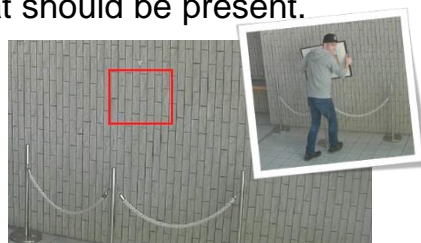
Object detection (left)

detects something left behind that shouldn't be there.



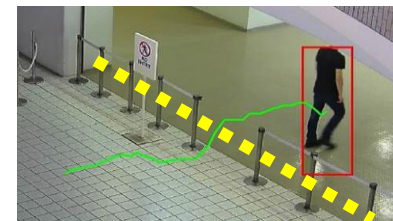
Object detection (removed)

detects objects disappearing that should be present.



Cross line detection

detects people or objects crossing the imaginary lines.



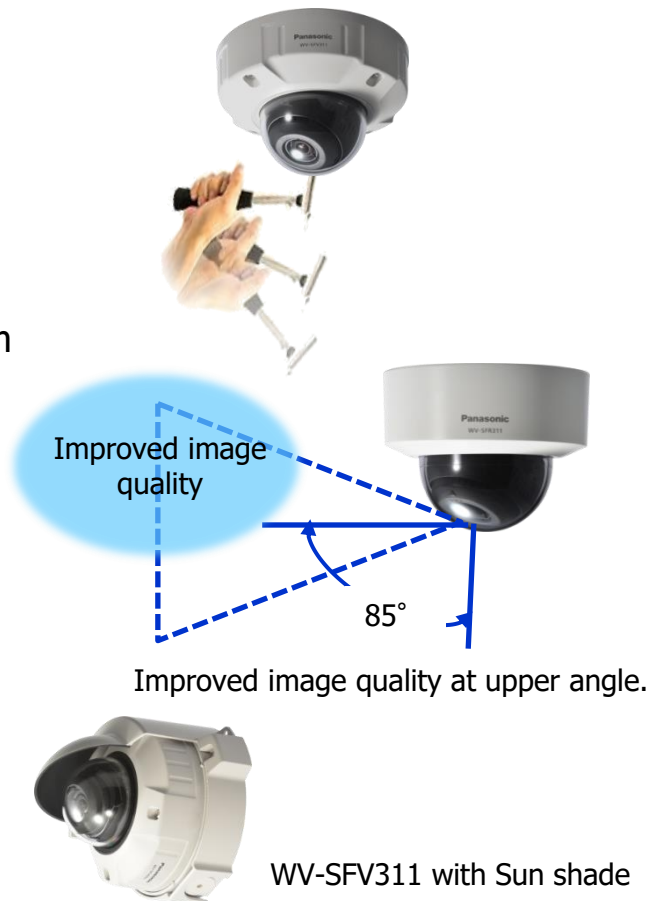
IP66-, NEMA-4X and IK10-rated robustness

The WV-SFV3xx outdoor cameras are IP66-, NEMA 4X- and IK10-rated weather and impact resistant. The WV-SFR3xx indoor cameras are IK10-rated impact resistant.

The built-in dehumidification unit keeps 3-series cameras in good running order for many years, preventing water and moisture from penetrating inside the camera.

Flexible installation

The wider tilt angle of lens up to 85° and distortion-free dome design enables lower pace installation than current models. With the WV-Q7118 Sun shade, 3-series outdoor cameras can be mounted on walls easily and quickly.

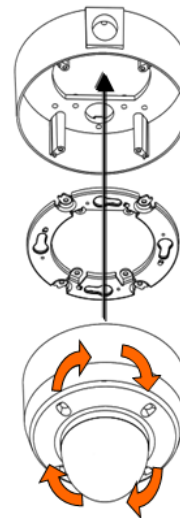


Easy mounting

The new mounting attachment enables easy installation. Once the attachment plate is secured on the ceiling, the camera can be fixed tightly just by rotated around 15°. Three installation, 2-gang junction box, with base bracket and direct mounting, are available.



With the non-screw lock Pan-Tilt-Yaw (PTY) mechanism, it is easy to adjust the viewing direction.



Base bracket
(WW-SFV311/310)

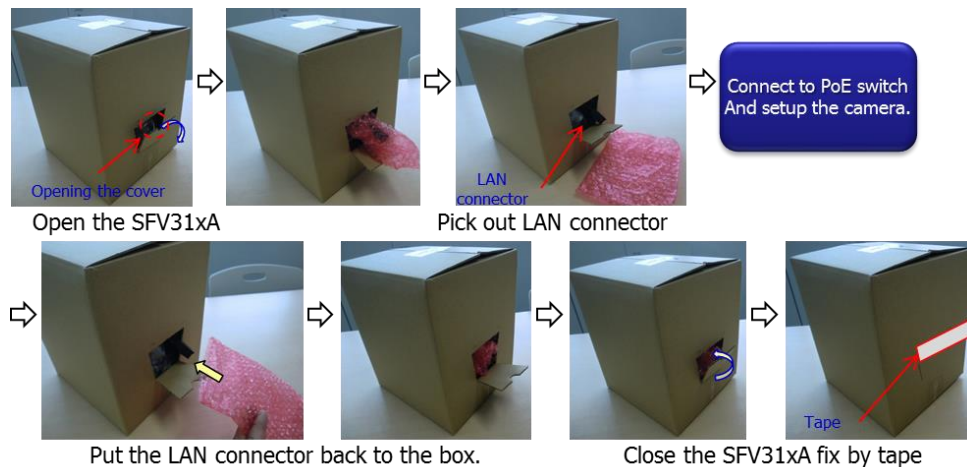
Attachment plate

Rotate the camera to lock.

Quick setup

Packaging box

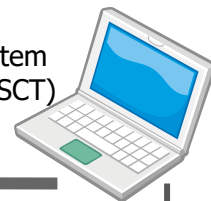
When you kit Panasonic network cameras, WV-SFV311A/310A can be setup without opening the packaging box. You can pick out LAN connector from the packaging box of WV-SFV311A/310A, and can set the basic configuration.



Quick setup tool (PC application)

When you deploy a lot of Panasonic network cameras on the site, Panasonic Security System Configuration Tool (PSSCT) makes it easy to configure and manage them.

Panasonic Security System
Configuration Tool (PSSCT)



SD memory card slot

Equipped with a SD memory card slot, new 3-series cameras store recordings locally on the SD card.

Central management

The WV-ASM200 i-PRO management software or System 970 manage the cameras and recorders at the central surveillance center.



Mobile monitoring Viewing

Panasonic Security Viewer enables viewing live and recorded videos on the smartphone and tablet.



View and Setting on Browser

When the camera is configured and checked, it does not have to be a specific browser such as only IE. Various browsers (Safari, Chrome*, Firefox and IE) can be used.

*The live display is supported only JPEG.




Alarm notification

When VMD, i-VMD, terminal alarm such as door alarm or command alarm is detected, the camera sends alarms to the operators based on pre-configured alert rule and/or saves images to the SD memory card or FTP server.





Privacy masking

The camera supports electronic privacy masking. Zones, the masked areas of the image, are easily defined.








Ceiling Mount Bracket

	WV-Q169A	WV-Q174B	WV-Q105A
Ceiling Mount Bracket			
Compatibility	WV-SFV311A WV-SFV310A	WV-SFR311A WV-SFR310A WV-SFN311L WV-SFN311A WV-SFN310A	WV-SFR311A WV-SFR310A WV-SFN311L WV-SFN311A WV-SFN310A

Dome cover

	Smoke Dome Cover WV-CW7S	Smoke Dome Cover WV-CR1S	Smoke Dome Cover WV-SF5SA	Sun Shade WV-Q7118
Dome cover				
Compatibility	WV-SFV311A WV-SFV310A	WV-SFR311A WV-SFR310A	WV-SFN311L WV-SFN311A WV-SFN310A	WV-SFV311A WV-SFV310A

Specifications

			WV-SFV311A	WV-SFV310A	WV-SFR311A	WV-SFR310A	WV-SFN311L	WV-SFN311A	WV-SFN310A	
										
Type			Outdoor Vandal resistant		Indoor Vandal resistant		Indoor			
Image sensor			1/3 type MOS Sensor							
Max. resolution			1,920 x 1,080*1 / 1,280 x 960							
			*1:Super resolution technology							
Max. frame rate			60 fps							
Day / Night			D/N (ICR)	Electrical	D/N (ICR)	Electrical	D/N (ICR)	D/N (ICR)	Electrical	
Minimum Illumination	Color	0.01 lx								
	B/W	0.003 lx	0.008 lx	0.003 lx	0.008 lx	0 lx	0.003 lx	0.008 lx		
Built-in IR LED light			-				Yes		-	
Angular Field of View	16:9 mode	Horizontal	28° (Tele) - 99° (Wide)		28° (Tele) - 99° (Wide)		28° (Tele) - 100° (Wide)			
		Vertical	16° (Tele) - 54° (Wide)		16° (Tele) - 54° (Wide)		16° (Tele) - 54° (Wide)			
	4:3 mode	Horizontal	28° (Tele) - 99° (Wide)		28° (Tele) - 99° (Wide)		28° (Tele) - 100° (Wide)			
		Vertical	21° (Tele) - 72° (Wide)		21° (Tele) - 72° (Wide)		21° (Tele) - 73° (Wide)			
Audio			Two-way	-	Two-way	-	Two-way		One-way Built-in mic.	
SD memory card slot			1 slot (SDXC/SDHC/SD)							
Ambient Operating Temperature			-40° C ~ 50° C (-40° F ~ 122° F)		-10° C ~ 50° C (-14° F ~ 122° F)					
Dimension			Φ164mm x 139mm (H) {ø6-15/32 x 5-15/32 in. (H)}		Φ129.5mm x 102.5mm (H) {ø5-3/32 x 4-1/32 in. (H)}		Φ129.5mm x 101mm (H) {ø5-3/32 x 3-31/32 in. (H)}			