



\*i-VMD Type2 : Intruder Detection / Loitering Detection / Direction Detection / Scene Change Detection / Object Detection / Cross Line Detection

### Full HD / 1,920 x 1,080 Compact Dome Network Camera (WV-SFV130 / WV-SFV130M)

### HD / 1,280 x 720 Compact Dome Network Camera (WV-SFV110 / WV-SFV110M)

#### Key Features

- 1080p Full HD images up to 30 fps (WV-SFV130 / WV-SFV130M)
- 720p HD images up to 30 fps (WV-SFV110 / WV-SFV110M)
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording.
- **Super Dynamic** and ABS (Adaptive Black Stretch) technologies deliver 122 dB wider dynamic range compared to conventional cameras.
- **Face Super Dynamic Range** technology ensures clear face image.
- High sensitivity with Day/Night (Electrical) function :  
0.1 lx (Color), 0.08 lx (B/W) at F2.3 (WV-SFV130 / WV-SFV130M)  
0.04 lx (Color), 0.03 lx (B/W) at F2.3 (WV-SFV110 / WV-SFV110M)
- **VIQS** (Variable Image Quality on Specified area) technology allows the designated **eight areas** to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate.
- **Smart coding Technology : Group of Pictures (GOP) control** function removes unnecessary information from the frame for realizing efficient encoding.  
**Auto VIQS** (Variable Image Quality on Specified area) function recognizes the no movement area in a video automatically and lowering the resolution of it to reduce the data size.  
With the latest bit rate reducing technology, **GOP control**, **Auto VIQS**, **3D-MNR** (Multi process Noise Reduction) and **FDI** (Frequency Divided Filter), the network bandwidth and the disk space of recorder can be saved.
- Progressive scan ensures clear images with less motion blur and no tearing even when the subject is moving.
- Light control modes :  
ELC (maximum exposure time) :  
The lightning control will be automatically performed by adjusting shutter speed in the range of ELC.
- 2x, 4x digital zoom controlled by browser
- **VMD** (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- **Privacy Zone** can mask up to 8 private areas, such as house windows and entrances/exits.
- **Camera title display** : Up to 20 alphanumeric characters on the browser
- **Alarm sources** including VMD and Panasonic alarm command can trigger actions such as FTP image transfer, E-mail notification, Indication on browser, and Panasonic alarm protocol output.
- **JPEG Image compression ratio** can be changed by alarm so that higher quality image can be provided.
- **Prioritized stream control** : One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- **SDXC/SDHC/SD Memory card slot** for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- **Face detection function** detects the position of human face and the information is sent by XML or video stream. (Optional)
- Can be added new intelligent extension software (Optional) in addition to built-in VMD (Video Motion Detection), alarm function.
- **Fog compensation function** equipped as standard.
- **HLC (High Light Compensation)** technology reduces strong light sources such as vehicle headlights to prevent camera being blinded.
- H.264 max. bit rate/client and Total bit rate control allows flexible network traffic management.  
Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.
- **Internet mode** : H.264 images can be transmitted over HTTP protocol.
- **Multi-language** : English / Italian / French / German / Spanish / Portuguese / Russian / Chinese / Japanese
- IPv4/IPv6 protocol supported
- Supports SSL, DDNS (viewnetcam, RFC2136)
- ONVIF compliant model
- Low profile design for discrete installation
- Electronics equipment used on rolling stock  
**EN50155-T3** (railroad standard) / EN50121, EN45545 compliant  
ECE-R10 (E approval), EN50498 compliant (WV-SFV130M/WV-SFV110M only)
- **Wide coverage**  
WV-SFV130 / WV-SFV130M [16 : 9 mode] Horizontal : 108 ° Vertical : 60 °  
WV-SFV110 / WV-SFV110M [16 : 9 mode] Horizontal : 100 ° Vertical : 55 °
- The camera conforms to the IP66, Type 4X (UL50) is compliant with NEMA 4X ratings, and provides high dust resistance and waterproof performance.
- **Vandal resistant mechanism** for high reliability

#### Optional Accessory

Smoke Dome Cover  
**WV-CW6SA**



# Specifications

<b>Camera</b>	Image Sensor	Approx. 1/3 type MOS image sensor	
	Scanning Mode	Progressive	
	Scanning Area	WV-SFV130	5.28 mm (H) x 2.97 mm (V)
		WV-SFV130M	{7/32 inches (H) x 1/8 inches (V)}
		WV-SFV110	4.86 mm (H) x 3.65 mm (V)
		WV-SFV110M	{3/16 inches (H) x 5/32 inches (V)}
	Minimum Illumination	WV-SFV130	Color: 0.1 lx (F2.3, Maximum shutter : Off (1/30s), AGC : High) 0.007 lx (F2.3, Maximum shutter : Max. 16/30s, AGC : High) *1
		WV-SFV130M	BW: 0.08 lx (F2.3, Maximum shutter : Off (1/30s), AGC : High) 0.005 lx (F2.3, Maximum shutter : Max. 16/30s, AGC : High) *1
		WV-SFV110	Color: 0.04 lx (F2.3, Maximum shutter : Off (1/30s), AGC : High) 0.003 lx (F2.3, Maximum shutter : Max. 16/30s, AGC : High) *1
		WV-SFV110M	BW: 0.03 lx (F2.3, Maximum shutter : Off (1/30s), AGC : High) 0.002 lx (F2.3, Maximum shutter : Max. 16/30s, AGC : High) *1
	White Balance	AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K)	
	Light Control Mode	ELC / Indoor scene 50 Hz / Indoor scene 60 Hz	
	Super Dynamic	On (High) / On (Normal) / Off	
	Dynamic range	122 dB typ. (Super Dynamic : On)	
	Face Super Dynamic	On / Off (only when Super Dynamic : On)	
	Adaptive Black Stretch	On / Off (only when Super Dynamic : Off)	
	Back light compensation (BLC)	On / Off (only when Super Dynamic : Off)	
	Fog compensation	On / Off (only when Super Dynamic / Adaptive black stretch: Off)	
	High light compensation (HLC)	On / Off (only when Super Dynamic / Back light compensation (BLC): Off)	
	AGC	On (High) / On (Mid) / On (Low) / Off	
Maximum shutter	max. 1/10,000 s, max. 1/4,000 s, max. 1/2,000 s, max. 1/1,000 s, max. 1/500 s, max. 1/250 s, max. 1/120 s, max. 1/100 s, max. 2/120 s, max. 2/100 s, max. 3/120 s, max. 3/100 s, max. 1/30 s, max. 2/30 s, max. 4/30 s, max. 6/30 s, max. 10/30 s, max. 16/30 s		
Day/Night (Electrical)	Off / Auto		
Digital Noise Reduction	High / Low		
Video Motion Detection	On / Off, 4 areas available		
Privacy Zone	On / Off (up to 8 zones available)		
VIQS	On / Off (up to 8 zones available)		
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks), On / Off		
<b>Lens</b>	Focal Length	2.8 mm (1/8 inches)	
	Digital (electronic) zoom	Choose from 3 levels of x1, x2, x4	
	Zoom ratio	x1 WV-SFV130 / WV-SFV130M : 3x Extra zoom (2.0 mega pixel [16 : 9] mode) WV-SFV110 / WV-SFV110M : 2x Extra zoom	
	Angular Field of View	WV-SFV130	[16 : 9 mode] Horizontal : 108 ° Vertical : 60 °
		WV-SFV130M	[4 : 3 mode] Horizontal : 89 ° Vertical : 66 °
		WV-SFV110	[16 : 9 mode] Horizontal : 100 ° Vertical : 55 °
WV-SFV110M	[4 : 3 mode] Horizontal : 100 ° Vertical : 73 °		
Maximum aperture ratio	1 : 2.3		
Focus Distance	0.5 m - ∞		
<b>Adjusting Angle</b>	Installing on a ceiling	Horizontal : -20 ° to +20 ° Vertical : -20 ° to 0 ° (right under) to +90 ° (right beside)	
	Installing on a wall	Horizontal : +90 ° to -90 ° Vertical : -20 ° to 0 ° (right beside) to +90 ° (right under)	
<b>Browser GUI</b>	Camera Control	Brightness	
	Display Mode	Spot, Quad: Image from 16 cameras can be displayed in 4 different Quad screens or 16 split screen (JPEG only). 20 characters camera title available.	
	Camera Title	Up to 20 alphanumeric characters	
	Clock Display	Time : 12H/24H/Off, Date : 5 formats on the browser, Summer time (Manual)	
	One Shot Capture	A still picture will be displayed on a newly opened window.	
	SD Memory	Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloaded.	
	Data Download	Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloaded.	
	GUI/Setup	English, Italian, French, German, Spanish, Portuguese, Chinese, Russian, Japanese	
	Menu Language	English, Italian, French, German, Spanish, Portuguese, Chinese, Russian, Japanese	
	System Log	Up to 100 (Internal), Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs	
	Supported OS *2 *3	Microsoft® Windows® 10, Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7	
	Supported Browser	Windows® Internet Explorer® 11 (32 bit) Windows® Internet Explorer® 10 (32 bit) Windows® Internet Explorer® 9 (32 bit) Windows® Internet Explorer® 8 (32 bit) Safari®, Google Chrome®, Mozilla Firefox® * with limitations in the part of setting screen	
<b>Network</b>	Network IF	10Base-T / 100Base-TX, RJ45 connector (female)	
	WV-SFV130 / WV-SFV110	10Base-T / 100Base-TX, RJ45 connector (female)	
	WV-SFV130M / WV-SFV110M	10Base-T / 100Base-TX, M12 connector (female)	
	Image Resolution	WV-SFV130	•2 mega pixel [16 : 9] 1,920 x 1,080 / 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90 * "1,920 x 1,080" mode is only available for H.264(1), H.264(2).
		WV-SFV130M	•2 mega pixel [4 : 3] 1,600 x 1,200 / 1,280 x 960 / 800 x 600 / VGA / 400 x 300 / QVGA / 160 x 120 * "1,600 x 1,200" mode is only available for H.264(1), H.264(2).
H.264/JPEG	WV-SFV110	•1.3 mega pixel [16 : 9] 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90	
	WV-SFV110M	•1.3 mega pixel [4 : 3] 1,280 x 960 / 800 x 600 / VGA / 400 x 300 / QVGA / 160 x 120	

<b>Network</b>	Image compression method	H.264 *5	
	Transmission Mode	Transmission Mode	Constant bit rate / Variable bit rate / Frame rate / Best effort / Advanced VBR
		Frame Rate	1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps
		Bit Rate per Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 6,144 / 8,192 / 10,240 / 12,288 / 14,336 / 16,384 / 20,480 / 24,576 / 30,720 / 40,960 kbps * The available range of the H.264 bit rate varies depending on the setting selected for "Image capture size".
		Image Quality	<When Constant bit rate or Best effort is selected> Low / Normal / Fine <When Variable bit rate is selected> 0 Super fine / 1 Fine / 2 / 3 / 4 / 5 Normal / 6 / 7 / 8 / 9 Low
	Smart Coding mode	Smart Coding mode	On (Low / Mid / High) / Off (Only when "Variable bit rate" is selected.)
		Transmission Type	Unicast / Multicast
	JPEG	Image Quality	10 steps
		Refresh Interval	0.1 fps - 30 fps
	Transmission Type	Transmission Type	Pull / Push
		Cropping function *6	Off / JPEG (1) / JPEG (2) / JPEG (3) / H.264 (1) / H.264 (2) / H.264 (3) / H.264 (4) / H.264 (all) Alarm action On / Off
	Audio compression method	G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps, AAC-LC *7 64 kbps, AAC-LC (HIGH QUALITY) *8 64 kbps / 96 kbps / 128 kbps	
	Bandwidth control	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps	
	Supported Protocol	IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, DiffServ IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, DiffServ	
	FTP Client	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDXC/SDHC/SD memory card is available.)	
Maximum concurrent access number	Up to 14 users (Depends on network conditions)		
SDXC/SDHC/SD Memory Card(Optional)	Manufactured by Panasonic (SD speed class 4 or higher) SDXC memory card : 64 GB, 128 GB SDHC memory card : 4 GB, 8 GB, 16 GB, 32 GB SD memory card : 2 GB (except miniSD card and microSD card)		
Cellular Phone Compatibility	JPEG image		
Mobile Terminal Compatibility	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ mobile terminals		
<b>Alarm</b>	Alarm Source	VMD, Command alarm, Audio detection alarm	
	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output	
	Alarm Log	With SDXC/SDHC/SD memory card : 5,000 logs	
	Schedule	VMD	
<b>General</b>	Safety/EMC Standard	<Safety> UL (UL60950-1), C-UL (CAN/CSA C22.2 No.60950-1), CE, IEC60950-1 <EMC> FCC Part15 ClassA, ICES003 ClassA, EN55022 ClassB, EN55024	
	Power Source and Power Consumption	PoE (IEEE802.3af compliant) 48 V DC : 90 mA / Approx. 4.3 W (Class 2 device)	
	Ambient	-40 °C to +60 °C (-40 °F to 140 °F)	
	Operating Temperature	(Power On range : -30 °C to +60 °C (-22 °F to 140 °F))	
	Ambient Operating Humidity	10 % to 90 % (no condensation)	
	Built-in microphone	Nondirectional electret condenser microphone	
	Shock resistance	Compliant with 50J (IEC 60068-2-75) / IK10 (IEC 62262)	
	Waterproof	IP66 (IEC60529), Type 4X (UL50), NEMA 4X compliant *9	
	Other standard support	EN50155-T3 (railroad standard) / EN50121, EN45545 compliant ECE-R10 (E approval), EN50498 compliant (WV-SFV130M/WV-SFV110M only)	
	Dimensions	<b>Installing using the mount bracket :</b> ø109 mm x 70 mm (H) {ø4-9/32 inches x 2-3/4 inches (H)} Dome radius 54 mm {2-1/8 inches} <b>Installing on a wall or a ceiling directly :</b> ø109 mm x 47 mm (H) {ø4-9/32 inches x 1-27/32 inches (H)} Dome radius 54 mm {2-1/8 inches}	
	Mass (approx.)	<b>When using mount bracket :</b> Approx. 410 g {0.9 lbs} <b>Installing on a wall or a ceiling directly :</b> Approx. 350 g {0.77 lbs}	
	Finish	<b>Main body :</b> Aluminum die cast, Light gray <b>Dome cover :</b> Polycarbonate resin, Clear	
Others	Tamper-resistant enclosure *10		

\*1 Converted value

\*2 Refer to "Notes on Windows® 7 / Windows® 8 / Windows® 8.1 / Windows® 10" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 10 or Microsoft® Windows® 8.1 or Microsoft® Windows® 8 or Microsoft® Windows® 7.

\*3 When using IPv6 for communication, use Microsoft® Windows® 10 or Microsoft® Windows® 8.1 or Microsoft® Windows® 8 or Microsoft® Windows® 7.

\*4 Used by super resolution techniques

\*5 Transmission for 4 streams can be individually set.

\*6 Cropping setting is not possible for stream set to maximum resolution.

\*7 Only use AAC-LC (Advanced Audio Coding - Low Complexity) when recording audio on an SD memory card.

\*8 When "AAC-LC (HIGH QUALITY)" is selected, there are limitations about the following function.

· "SD memory card" is not available.

· "Audio detection" is not available.

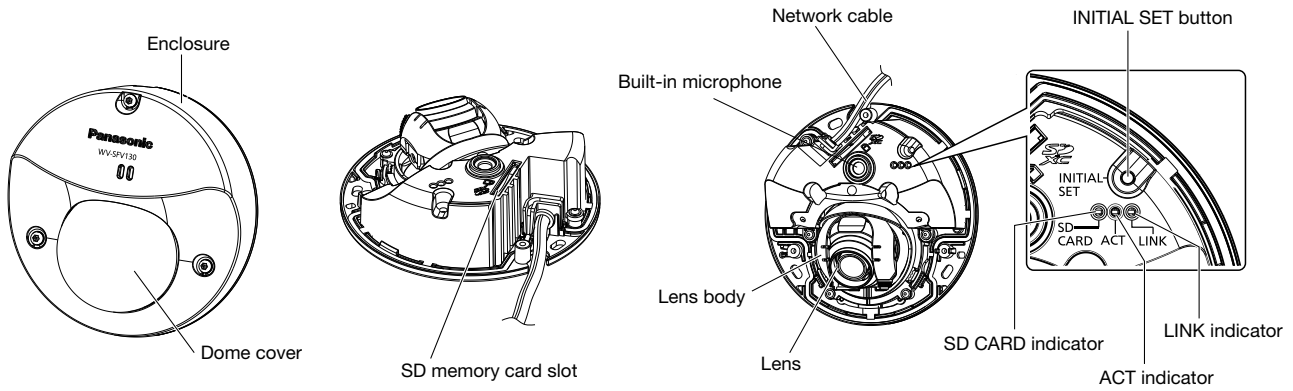
· HTTPS is not available.

· The maximum concurrent access number is limited to 5

\*9 Only when installation work is properly performed and appropriate waterproof treatment is performed.

\*10 Component that has a structure on which the screws that are accessible after installation cannot be screwed or unscrewed using an ordinary screwdriver

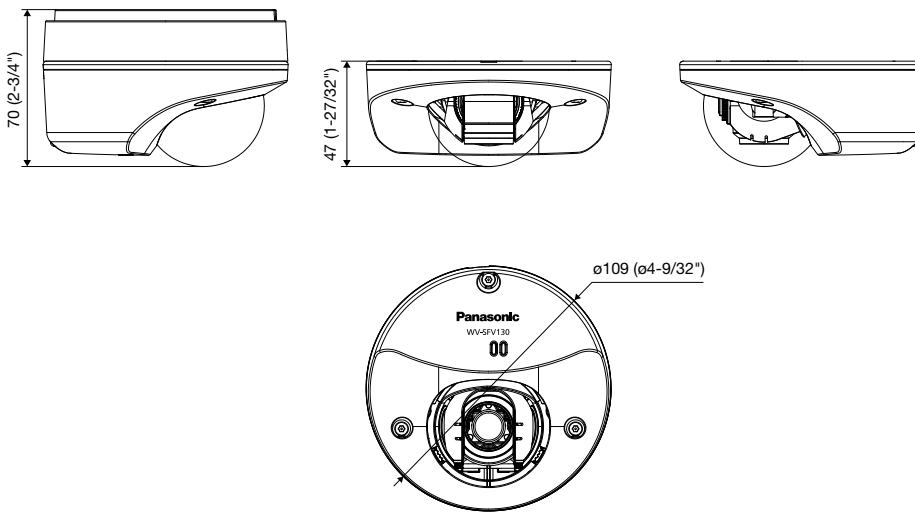
## Part Names and Functions



\* These illustrations are WV-SFV130.

## Appearance

Unit : mm (inches)



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### Important


- Safety Precaution: Carefully read the Important Information, Installation Guide and operating instructions before using this product.
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

- Masses and dimensions are approximate.
- Specifications are subject to change without notice.

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