

# WV-SFV631L

# WV-SFV611L



**Full HD / 1,920 x 1,080 60 fps H.264 Vandal Resistant Network Camera featuring Super Dynamic (WV-SFV631L)**  
**HD / 1,280 x 720 60 fps H.264 Vandal Resistant Network Camera featuring Super Dynamic (WV-SFV611L)**

### Key Features

- **1080p Full HD / 720p HD images up to 60 fps**
- Approximate 1/3 inches, high sensitivity MOS image sensor
- Super high resolution at Full HD/1,920 x 1,080 created by high sensitivity MOS Sensor. (WV-SFV631L only)
- **Multiple H.264 (High profile) streams (max. 4 streams)** and JPEG streams ensure simultaneous real time monitoring and high resolution recording by new enhanced "UniPhier", Panasonic's proprietary System LSI platform.
- Maximum Screen Size is 2,048 x 1,536\* @30fps, H.264 (WV-SFV631L only)  
\* Used by super resolution techniques
- **Enhanced Super Dynamic** and ABS (Adaptive Black Stretch) technologies deliver **133 dB** wider dynamic range compared to conventional cameras.
- **Multi process NR & 3D-DNR** ensures noise reduction in various conditions.
- High sensitivity with Day & Night (IR) function:  
WV-SFV631L: 0.04 lx (Color), 0.01 lx (B/W) at F1.3  
WV-SFV611L: 0.01 lx (Color), 0.003 lx (B/W) at F1.3
- **IR LED** equipped: The equipped infrared LED makes it possible to take pictures at zero lx.
- **IR LED** is controlled to match the environment, thereby the camera provides clear images of human faces without white blur.
- New camera attachment bracket allows an **easy camera installation** toward all four directions.
- **High Speed ABF (Auto Back Focus) and Motorized Zoom** ensures easy installation.
- Newly developed lens with aperture control function realizes the best focus in any environment.
- **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.
- Cropping function enables to provide whole image and the part image simultaneously. Up to 4 image capture areas can be specified, and it is also possible to control the sequence.
- **Face Super Dynamic Range** technology ensures clear face image.
- Lens distortion compensation for the distorted images can be adjusted 256 steps.
- Electronic sensitivity enhancement: Auto (Up to 16/30s) / OFF
- Selectable light control modes:  
**Outdoor scene, Indoor scene (50 Hz) / Indoor scene (60 Hz), Fix shutter**  
Indoor scene (50 Hz/60Hz): Flicker caused by fluorescent lightning will be automatically compensated.
- 3x (WV-SFV631L), 2x (WV-SFV611L) extra optical zoom at 640 x 360 resolution
- 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 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SDXC/SDHC/SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic alarm protocol output.
- Full duplex bi-directional audio allows interactive communication between camera site and monitoring site.

- 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.
- **Double SDXC/SDHC/SD Memory card slots** for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (H.264 / JPEG). Realize long-term recording and auto backup function.
- Newly developed dome cover provides clearer images above the horizontal. Thereby, it expands the tilting range of the lens.
- Can be added new intelligent extension software in addition to built-in VMD (Video Motion Detection), alarm function.
- **Fog compensation function** equipped as standard.
- **Super Chroma Compensation** function realizes a better color reproducibility even in low illumination.
- 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)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- Onvif compliant model
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X(UL50), NEMA 4X compliant.
- Dehumidification device for use with various weather conditions
- Vandal resistant mechanism for high reliability

### Standard Accessories

- Important Information.....1 pc.
- Installation Guide.....1 set
- CD-ROM\*1.....1 pc.
- Code Label\*2.....1 pc.

\*1 The CD-ROM contains the operating instructions and different kinds of tool software programs.  
\*2 This label may be required for network management. The network administrator shall retain the code label.

The following parts are used during installation procedures.

- Base bracket.....1 pc.
- Attachment plate.....1 pc.
- Fixing screws for attachment plate (M4 x 8 mm).....5 pcs. (of them, 1 for spare)
- Template A (for the attachment plate).....1 sheet.
- Template B (for the base bracket).....1 sheet.
- Waterproof tape.....1 pc.
- Bit.....1 pc.
- 4P alarm cable.....1 pc.
- 2P power cable.....1 pc.
- MONITOR OUT conversion plug.....1 pc.
- LAN cable cover.....1 pc.

### Optional Accessories

Ceiling Mount Bracket <b>WV-Q169A</b>	Dome Cover <b>WV-CW7S</b>	Sun Shade <b>WV-Q7118</b>
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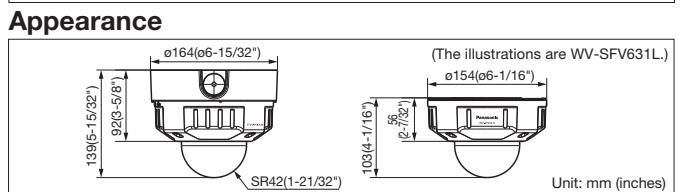
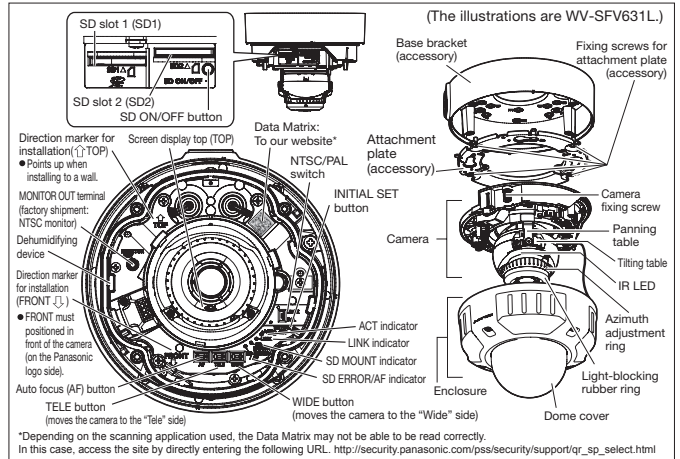
# Specifications

<b>Camera</b>	Image Sensor	Approx. 1/3 type MOS image sensor	
	Effective Pixels	WW-SFV631L: Approx. 2.4 mega pixels, WW-SFV611L: Approx. 1.3 mega pixels	
	Scanning Mode	Progressive scan	
	Scanning Area	WW-SFV631L: 5.436 mm (H) x 3.336 mm (V) (7/32 inches (H) x 1/8 inches (V)) WW-SFV611L: 4.864 mm (H) x 3.891 mm (V) (3/16 inches (H) x 5/32 inches (V))	
	Minimum Illumination	WW-SFV631L: Color: less than 0.04 lx, BW: 0.01 lx (F1.3, Maximum shutter: Max. 1/30s, Gain: On(High)) Color: less than 0.003 lx, BW: 0.0007 lx (F1.3, Maximum shutter: Max. 16/30s, Gain: On(High)) <sup>1</sup> WW-SFV611L: Color: less than 0.01 lx, BW: 0.003 lx (F1.3, Maximum shutter: Max.: Off (1/30s), Gain: On(High)) Color: less than 0.0007 lx, BW: 0.0002 lx (F1.3, Maximum shutter: Max.: Max. 16/30s, Gain: On(High)) <sup>1</sup>	
	IR LED Light	Off/Auto(High/Mid/Low)	
	IR LED irradiation distance	Approx. 30 m (98.43 feet)	
	White Balance	AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K)	
	Light Control Mode	Outdoor scene: Automatic integration of ALC and ELC Indoor scene [50 Hz]: Automatic integration of ALC and ELC with flickerless Indoor scene [60 Hz]: Automatic integration of ALC and ELC with flickerless	
	Shutter Speed	[2 mega pixel [16:9] (60 fps mode) / 1.3 mega pixel [16:9] (60 fps mode)] OFF(1/60), 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 Other than [2 mega pixel [16:9] (60 fps mode) / 1.3 mega pixel [16:9] (60 fps mode)] OFF(1/30), 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	
	Super Dynamic	On(High) / On(Normal) / Off	
	Face Super Dynamic	ON / OFF (Only at Super Dynamic : ON)	
	Adaptive Black Stretch	ON / OFF (Only when Super Dynamic OFF)	
	Fog compensation	ON / OFF (Only when Super Dynamic/ Adaptive black stretch: Off)	
	AGC	ON (LOW, MID, HIGH) / OFF	
	Electronic Sensitivity UP	max. 1/1000 s, max. 1/500 s, max. 1/250 s, max. 1/100 s, max. 1/60 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 (IR)	Off/ On/ Auto1 (Normal)/ Auto2 (IR Light)/ Auto3 (SCC)	
	Dynamic Range	133 dB typ. (Super Dynamic : ON, Light Control Mode : indoor)	
	Digital Noise Reduction	High / Low	
	Video Motion Detection	4 areas, Sensitivity : 15 steps, Detection size : 10 steps	
	Privacy Zone	Up to 8 zones	
	VIQS	Up to 8 zones	
	Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks)	
	Electric Zoom	TELE / WIDE, Auto Coarse adjustment of Focus	
	Focus Adjustment	ABF / MANUAL (Html only)	
Lens Distortion Compensation	256 steps		
Vari Focal Length	2.8 - 10mm (1/8 inches - 13/32 inches)		
Angular Field of View	WW-SFV631L [16 : 9 mode]	Horizontal : 28.8° (TELE) - 102.6° (WIDE) Vertical : 16.0° (TELE) - 56.0° (WIDE) [4 : 3 mode] Horizontal : 23.7° (TELE) - 84.3° (WIDE) Vertical : 17.8° (TELE) - 62.4° (WIDE)	
	WW-SFV611L [16 : 9 mode]	Horizontal : 26.4° (TELE) - 93.7° (WIDE) Vertical : 14.8° (TELE) - 51.6° (WIDE) [4 : 3 mode] Horizontal : 26.4° (TELE) - 93.7° (WIDE) Vertical : 20.0° (TELE) - 69.3° (WIDE)	
Maximum Aperture Ratio	1 : 1.3 (WIDE) - 1 : 3.0 (TELE) *with Smart DOF (Depth of Field) mode		
Focusing Range	0.3 m - ∞		
<b>Adjusting Angle</b>			
Horizontal: ±180°, Vertical: 0-85°, Image tilt adjustment range: -45° (Left) to +300° (Right)			
<b>Browser GUI</b>	Cropping	H.264(1) / H.264(2) / H.264(3) / H.264(4) / H.264(all) / JPEG(1) / JPEG(2) / JPEG(3) Up to 4 image capture areas can be specified	
	Camera Control	Brightness, AUX ON / OFF	
	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.	
	Digital Zoom	1x, 2x, 4x controlled by browser GUI	
	Camera Title	Up to 20 alphanumeric characters	
	Clock Display	Time : 12H/24H, Date : 5 formats on the browser, Summer time (Manual)	
	Alarm Control	Reset	
	One Shot Capture	A still picture will be displayed on a newly opened window.	
	Audio	Mic (Line) Input : ON / OFF Volume adjustment : Low / Middle / High, Audio Output : ON / OFF Volume adjustment : Low / Middle / High	
	SD Memory Data Download GUI / Setup Menu Language System Log	Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloaded. English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese Up to 100 (Internal) Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs	
	Supported OS <sup>2</sup>	Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®	
	Supported Browser	Windows® Internet Explorer® 10.0 (32 bit), Windows® Internet Explorer® 9.0 (32 bit) Windows® Internet Explorer® 8.0 (32 bit), Windows® Internet Explorer® 7.0 (32 bit) 10Base-T / 100Base-TX, RJ-45 connector	
<b>Network</b>	Network IF	Image Capture Mode: 2 mega pixel [16:9] (30/60 fps)	WW-SFV631L : 1,920 x 1,080 / 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90
		Image Capture Mode: 2 mega pixel [4:3] (30fps)	WW-SFV631L : 1,600 x 1,200 / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120
		Image Capture Mode: 3 mega pixel [4:3] (30fps)	WW-SFV631L : 2,048 x 1,536 <sup>3</sup> / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120 <sup>3</sup> Used by super resolution techniques
	Image Resolution	Image Capture Mode: 1.3 mega pixel [16:9] (30/60fps)	WW-SFV611L : 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90
		Image Capture Mode: 1.3 mega pixel [4:3] (30fps)	WW-SFV611L : 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120
		Transmission Mode	Constant bitrate / Framerate priority / Best effort / Advanced VBR
	H.264 <sup>3</sup>	Frame Rate	1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 / 60 fps
		Bit Rate/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 kbps
		Image Quality	LOW / NORMAL / FINE
		Refresh interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5s
		Transmission Type	UNICAST / MULTICAST
	JPEG	Image Quality	10 steps
Refresh interval		0.1 fps - 30 fps (JPEG frame rate will be restricted when displaying both JPEG and H.264 images.)	
Transmission Type	PULL / PUSH		
Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps / AAC-LC		
Audio Mode	OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)		
Authentication for Audio	Level 1 only / Level 2 higher / All users		
Total Bit Rate	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 6,144 / 8,192 kbps / Unlimited		
Supported Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, RTP, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTSP/RTCP, FTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP		

<b>Network</b>	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.)
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
	SDXC/SDHC/SD Memory Card (Option)	H.264 recording : Manual REC / Alarm REC (Pre/Post) / Schedule REC/ Backup upon network failure Compatible(JPEG only)
	* Manufactured by Panasonic (SD speed class 4 or higher)	JPEG recording : Manual REC / Alarm REC (Pre/Post) / Backup upon network failure Compatible SD (SDHC/SDXC) card: Panasonic 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64GB** model
	Employment of two SD cards	*SDHC card, **SDXC card (except miniSD card and microSD card)
	Cellular Phone Compatibility	Dual Recording for Redundancy Series Recording for long time
	Mobile Terminal Compatibility	JPEG image, AUX control (by access level) iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ Terminal
	Alarm Source	3 terminals input, VMD, Command alarm, Audio detection alarm
	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, FTP image transfer, Panasonic protocol output
	Alarm Log	With SDXC/SDHC/SD memory card : Up to 50,000 logs for each SD memory card
Input/ Output	Schedule	Alarm / VMD / Access permission / H.264 recording / Scene file
	Monitor Output (for adjustment)	VBS : 1.0 V (p-p)/75 Ω, NTSC / PAL composite, ø3.5mm mini jack MONITOR OUT conversion plug included
<b>General</b>	Microphone/Line Input	MIC IN and Line IN are selectable. ø3.5 mm monaural mini jack (monaural input) (Applicable microphone: Plug-in power type) Supply voltage: 2.5 V ±0.5 V Input Impedance: Approx. 2 kΩ (unbalanced)
	Audio Output	ø3.5 mm stereo mini jack (monaural output) Output impedance: Approx. 600 Ω (unbalanced)
	External I/O Terminals	ALARM IN 1/DAY/NIGHT IN, ALARM IN 2/ALARM OUT, ALARM IN 3/AUX OUT
	Safety	UL (UL60950-1), C-UL (CAN/CSA C22.2 No.60950-1), CE, IEC60950-1
	EMS	FCC (Part15 ClassA), ICES003 ClassA, EN55022 ClassB, EN55024
	Power Source and Power Consumption	When IR LED is ON WW-SFV631L DC power supply: 12 V DC/1080 mA/Approx. 12.9 W PoE Device: 48 V DC/270 mA/Approx. 12.95 W* (Class 0 device) WW-SFV611L DC power supply: 12 V DC/1010 mA/Approx. 12.1 W PoE Device: 48 V DC/270 mA/Approx. 12.95 W* (Class 0 device) * Maximum power consumption on the camera power input side. ** ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY.
	Ambient Operating Temperature	-45°C ~ +50°C (-49°F ~ 122°F)
	Ambient Operating Humidity	20 ~ 90 % (no condensation)
	Impact Protection	IEC 60068-2-75 test Eh, 50 J / IEC 62262 IK10
	Water and Dust Resistance	IP66, IEC60529 measuring standard compatible, Type 4X(UL50), NEMA 4X compliant
Shock Resistance	Compliant with 50 J IEC60068-2-75	
Dimensions	ø164 mm x 139 mm (H) (ø6-15/32 inches x 5-15/32 inches (H))	
Mass (approx.)	1.6kg (3.53 lbs.)	
Finish	Main body : Aluminum die cast, light gray / Dome section: Clear polycarbonate resin	

<sup>1</sup> Converted value  
<sup>2</sup> Refer to "Notes on Windows Vista® / Windows® 7 / Windows® 8" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.  
<sup>3</sup> Transmission for 4 streams can be individually set.

## Part Names and Functions



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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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