# Panasonic

Super Dynamic Full HD Vandal Resistant & Waterproof Dome Network Camera

### WV-SFV631L

Super Dynamic HD Vandal Resistant & Waterproof Dome Network Camera

## 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\*1
- 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<sup>\*1</sup> 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.
   VIOS (Variable Image Quality on Specified area) technology allows the designated eight areas.
- 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 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.
- 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. (As of June 2014)
- Super Chroma Compensation function realizes a better color
- 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

\*1 Super Dynamic function is automatically set off on 60fps mode.

#### **Optional Accessories**

Ceiling Mount Bracket



Smoke Dome Cover WV-CW7S



Sun Shade WV-Q7118



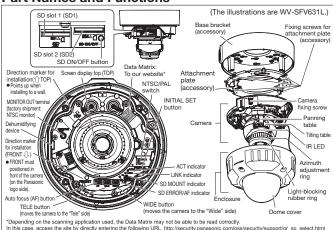
#### Specifications

Camera		ations	Approx 1/2 type MOC image cons
oamera	Image Sensor Effective Pixels		Approx. 1/3 type MOS image sensor  WV-SFV631L: Approx. 2.4 mega pixels, WV-SFV611L: Approx. 1.3 mega pixels
	Scanning Mode		Progressive scan
	Scanning Area		$ WV-SFV631L: 5.346 \ mm \ (H) \times 3.336 \ mm \ (V) \ \{7/32 \ inches \ (H) \times 1/8 \ inches \ (V) \ WV-SFV611L: 4.864 \ mm \ (H) \times 3.891 \ mm \ (V) \ \{3/16 \ inches \ (H) \times 5/32 \ inches \ (V) \ (V) \ \{3/16 \ inches \ (H) \times 5/32 \ inches \ (V) \ (V)$
	Minimum Illumination		WV-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))
			WV-SFV611L:  Color: less than 0.01 k, BW: 0.003 k (F1.3, Maximum shutter: Max.: Off (1/30s), Gain: On(High))  Color: less than 0.0007 k, BW: 0.0002 k (F1.3, Maximum shutter: Max.: Max. 16/30s, Gain: On(High))
	IR LED Light IR LED irradiation distance		Off/Auto(High/Mid/Low) Approx. 30 m {98.43 feet}
	White Balance Light Control Mode		AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K) 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, 1/1000 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, 1/500, 1/000, 1/2000, 1/4000, 1/1000
	Super Dynamic *2		On(High) / On(Normal) / Off
	Face Super Dynamic		ON / OFF (Only at Super Dynamic : ON)
	Adaptive Black Stretch Fog compensation		ON / OFF (Only when Super Dynamic OFF)
	AGC Electronic Sensitivity UP		ON / OFF (Only when Super Dynamic/ Adaptive black stretch: Off) ON (LOW, MID, HIGH) / OFF max. 1/1000 s, max. 1/500 s, max. 1/250 s, max. 1/100 s, max. 1/60 s,
	Day & Night (IR)		max. 1/1000 s, max. 1/500 s, max. 1/200 s, max. 1/100 s, max. 1/30 s, max. 2/30 s, max. 2/30 s, max. 6/30 s, max. 10/30 s, max. 10/30 s, max. 16/30 Off/ On/ Auto1 (Normal)/ Auto2 (IR Light)/ Auto3 (SCC)
	Dynamic Range Digital Noise Reduction		133 dB typ. (Super Dynamic : ON, Light Control Mode : indoor) High / Low
	Video Motion Detection		4 areas, Sensitivity: 15 steps, Detection size: 10 steps
	Privacy Zone VIQS		Up to 8 zones Up to 8 zones
	Camera Title (OSD)		Up to 20 characters (alphanumeric characters, marks)
	Focus Adjustment		TELE / WIDE , Auto Coarse adjustment of Focus ABF / MANUAL(Html only)
Lens	Lens Distortion Compensation Vari Focal Length		256 steps 2.8 ~ 10mm {1/8 inches – 13/32 inches}
LC113		r Field of View	2.8 ~ 10mm {1/8 inches = 13/32 inches} WV-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)
Adjusting			WV-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 Focusing Range		1 : 1.3 (WIDE) $\sim$ 1 : 3.0 (TELE) *with Smart DOF (Depth of Field) mode 0.3 m $\sim \infty$
	g Angle		Horizontal: ±180°, Vertical: 0-85°, Image tilt adjustment range: -45° (Left) to +300° (Right)
Browser GUI	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 Display Mode		Brightness, AUX ON / OFF Spot, Quad : Image from 16 cameras can be displayed in 4 different Quac
	Digital Zoom		screens or 16 split screen (JPEG only). 20 characters camera title available 1x, 2x, 4x controlled by browser GUI
	Camera Title Clock Display		Up to 20 alphanumeric characters Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)
	Alarm Control		Reset
	One Shot Capture Audio		A still picture will be displayed on a newly opened window.  Mic (Line) Input: ON / OFF Volume adjustment: Low / Middle / High,
Network	SD Momony Data Daysis		Audio Output: ON / OFF Volume adjustment: Low / Middle / High Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloade
	SD Memory Data Download GUI / Setup Menu Language System Log		Suil or motion images recorded in the SDXX/SDHC/SD memory card can be downloade English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanesi Up to 100 (Internal)
	Supported OS *3		Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error log Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®
	Supported Browser  Network IF		Windows® Internet Explorer® 10.0 (32 bit), Windows® Internet Explorer® 9.0 (32 bit), Windows® Internet Explorer® 7.0 (32 bit), Windows® 1.0
		Image Capture Mode: 2 mega pixel [16:9] (30/60 fps)	WV-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)	WV-SFV631L: 1,600 x 1,200 / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 12
	Image Resolution	Image Capture Mode: 3 mega pixel [4:3] (30fps)	WV-SFV631L: 2,048 x 1,536*/1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 121
			* Used by super resolution techniques
		Image Capture Mode: 1.3 mega pixel [16:9] (30/60fps) Image Capture Mode:	WV-SFV611L: 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90 WV-SFV611L:
		1.3 mega pixel [4:3] (30fps)	1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120 Constant bitrate / Framerate priority / Best effort / Advanced VBR
	H.264 *4	Frame Rate Bit Rate/Client	1/3/5/7.5/10/12/15/20/30/60 fps 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 Refresh interval	LOW / NORMAL / FINE 0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5s
		Transmission Type	UNICAST / MULTICAST
	JPEG	Image Quality Refresh interval	10 steps 0.1 fps - 30 fps
	JI EG	Transmission Type	(JPEG frame rate will be restricted when displaying both JPEG and H.264 images PULL / PUSH
	Audio Compression		G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps / AAC-LC
	Audio Mode Authentication for Audio		OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex) Level 1 only / Level 2 higher / All users
	Total Bit Rate Supported Protocol		64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimite IPv6: TCPIP, UDP/P, HTTP, HTTPS, TFP, SMIP, DNS, NTP, SNMP, DHCPv6, RTP, MLD, ICMP, ARI IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS NTP, SNMP, UPPR, IGMP, ICMP, ARP

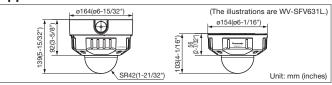
Network	FTP Client	Alarm image transmission, FTP periodic transmission (When the FTP transmission
		is failed, backup on an optional SDXC/SDHC/SD memory card is available.)
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
	SDXC/SDHC/SD	H.264 recording: Manual REC / Alarm REC (Pre/Post) / Schedule REC/
	Memory Card (Option)	Backup upon network failure Compatible(JPEG only)
	* Manufactured by Panasonic	JPEG recording : Manual REC / Alarm REC (Pre/Post) /
	(SD speed class 4 or higher)	Backup upon network failure Compatible
	* Use the SD memory card that	SD (SDHC/SDXC) card: Panasonic
	complies with UHS-1	2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64GB** model
	(Ultra High Speed-1) in the case of SD Speed Class 10.	
	· ·	*SDHC card, ** SDXC card (except miniSD card and microSD card)
	Employment of two SD cards	Dual Recording for Redundancy
		Series Recording for long time
	Cellular Phone Compatibility	JPEG image, AUX control (by access level)
	Mobile Terminal Compatibility	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ Terminal
Alarm	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
	Schedule	Alarm / VMD / Access permission / H.264 recording / Scene file
Input/	Monitor Output	VBS: 1.0 V [p-p]/75 Ω, NTSC / PAL composite,
Output	(for adjustment)	ø3.5mm mini jack MONITOR OUT conversion plug included
Gutput	Microphone/Line Input	MIC IN and Line IN are selectable. ø3.5 mm monaural mini jack
	Wildrophone/Eine Input	(monaural input) (Applicable microphone: Plug-in power type)
		Supply voltage: 2.5 V $\pm$ 0.5 V Input impedance: Approx. 2 k $\Omega$ (unbalanced)
	Audio Output	supply voltage. 2.5 v ±0.5 v input impedance. Approx. 2 kΩ (unbalanced) 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
General	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	When IR LED is ON
	Power Consumption	WV-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)
		WV-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)}
	* Installing using the base bracket	Dome radius 42 mm {1-21/32 inches}
	Mass (approx.)	1.6kg {3.53 lbs.}
	Finish	Main body: Aluminum die cast, light gray / Dome section: Clear polycarbonate resin
14 0	-1 *0 C D	to antique in a contraction to a set of an experience of

\*1 Converted value \*2 Super Dynamic function is automatically set off on 60fps mode.
\*3 Refer to \*Notes on Windows Vista\* / Windows\* 7 / Windows\* 8\* on the provided CD-POM for further information about system requirements for a PC and precautions when using Microsoft® Windows\* 8 or Microsoft® Windows\* 7 or Microsoft® Windows\* Vista\*.
\*4 Transmission for 4 streams can be individually set.

#### **Part Names and Functions**



#### **Appearance**



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- 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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