



### HD/1,280 x 960 H.264 Dome Network Camera with 2x Extra Zoom (wv-sf135) VGA/640 x 480 H.264 Dome Network Camera (wv-sf132)

#### Key Features

- 720p HD images up to 30 fps (WV-SF135)
- 1.3 Megapixel high sensitivity MOS Sensor (WV-SF135)
- 0.32 Megapixel high sensitivity MOS Sensor (WV-SF132)
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by "UniPhier<sup>®</sup>", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,280 x 960 image size (WV-SF135)
- Full frame (Up to 30 fps) transmission at VGA (640 x 480) image size (WV-SF132)
- ABS (Adaptive Black Stretch) technologies deliver wider dynamic range compared with conventional cameras.
- High sensitivity with Day & Night (Electrical) function:  
0.8 lx (Color), 0.6 lx (B/W) at F2.2 (WV-SF135)  
2.0 lx (Color), 1.3 lx (B/W) at F2.9 (WV-SF132)
- VIQS (Variable Image Quality on Specified area) technology allows the designated area 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.
- Digital Noise Reduction: 3D-DNR ensures noise reduction in various conditions.
- Progressive scan ensures clear images with less motion blur and no tearing even when the subject is moving.
- Superior color reproduction by primary (RGB) color filter
- Electronic sensitivity enhancement:  
Auto (Up to 16x) / OFF (WV-SF135)  
Auto (Up to 8x) / OFF (WV-SF132)
- 2x extra zoom at VGA resolution (WV-SF135)
- 2x, 4x digital zoom controlled by browser
- Selectable light control modes: Indoor scene (50 Hz) / Indoor scene (60 Hz) / ELC (maximum exposure time)  
Indoor scene (50 Hz/60Hz): Flicker caused by fluorescent lightning will be automatically compensated.  
ELC (maximum exposure time): The lightning control will be automatically performed by adjusting shutter speed in the range of ELC.
- VMD (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 2 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.
- 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 / 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
- Low profile design for discrete installation
- Wide coverage  
WV-SF135 Horizontal: 104°, Vertical: 85°  
WV-SF132 Horizontal: 68°, Vertical: 53°

#### Standard Accessories

- Installation Guide .....1 pc.
- Important Safety Instructions.....1 pc.
- CD-ROM\*1 .....1 pc.
- Code Label\*2 .....1 pc.
- Lens adjuster.....1 pc.

The followings are for installation.

- Installation Template Label .....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.

#### Optional Accessories

Smoke Dome Cover  
WV-CW6S



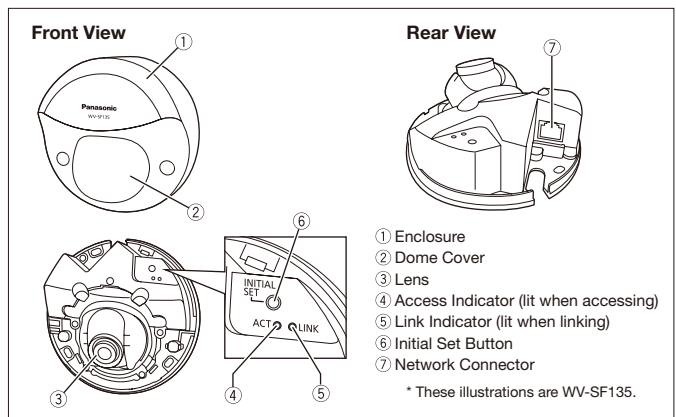
## Specifications

TV System		NTSC	PAL			
Camera	Image Sensor	WV-SF135: 1/3 type MOS image Sensor WV-SF132: 1/5 type MOS image Sensor				
	Effective Pixels	WV-SF135: Approx. 1.3 megapixels WV-SF132: Approx. 0.32 megapixels				
	Scanning Mode	Progressive scan				
	Scanning Area	WV-SF135: 4.8 mm (H) x 3.6 mm (V) (3/16" (H) x 5/32" (V)) WV-SF132: 2.69 mm (H) x 2.01 mm (V) (1/8" (H) x 1/16" (V))				
	Minimum Illumination	WV-SF135: Color: 0.8 lx (F2.2, Auto slow shutter: Off (1/30 s), Gain: On (High)) 0.05 lx (F2.2, Auto slow shutter: Max. 16/30 s, Gain: On (High)) BW: 0.6 lx (F2.2, Auto slow shutter: Off (1/30 s), Gain: On (High)) 0.04 lx (F2.2, Auto slow shutter: Max. 16/30 s, Gain: On (High)) WV-SF132: Color: 2.0 lx (F2.9, Auto slow shutter: Off (1/30 s), Gain: On (High)) 0.3 lx (F2.9, Auto slow shutter: Max. 8/30 s, Gain: On (High)) BW: 1.3 lx (F2.9, Auto slow shutter: Off (1/30 s), Gain: On (High)) 0.16 lx (F2.9, Auto slow shutter: Max. 8/30 s, Gain: On (High))				
	White Balance	AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K)				
	Light Control Mode	Indoor scene (50 Hz / 60 Hz) / ELC				
	Shutter Speed	1/30, 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/8,000 (WV-SF132), 1/10,000 (WV-SF135)				
	Adaptive Black Stretch	ON / OFF				
	AGC	ON (LOW, MID, HIGH) / OFF				
	Electronic Sensitivity	WV-SF135: OFF (1/30) / AUTO (Max. 2x (2/30 s), 4x (4/30 s), 6x (6/30 s), 10x (10/30 s), 16x (16/30 s)) WV-SF132: OFF (1/30) / AUTO (Max. 2x (2/30 s), 3x (3/30 s), 4x (4/30 s), 8x (8/30 s))				
	UP					
	Day & Night (electrical)	Auto / OFF				
	Digital Noise Reduction	High / Low				
	Video Motion Detection	ON / OFF, 4 areas available				
Privacy Zone	ON / OFF (up to 2 zones available)					
VIQS	ON / OFF					
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks), ON / OFF					
Lens	Focal Length	1.95 mm				
	Zoom Ratio	WV-SF135: 1x Extra Zoom: 2x (at VGA resolution) WV-SF132: 1x				
	Angular Field of View	WV-SF135: Horizontal: 104°, Vertical: 85° WV-SF132: Horizontal: 68°, Vertical: 53°				
	Maximum Aperture Ratio	1 : 2.2 (WV-SF135) 1:2.9 (WV-SF132)				
	Focusing Range	0.5 m - ∞				
Adjusting Angle	Ceiling Installation Horizontal: -20° to +20° Vertical: -20° to +90° Wall Installation Horizontal: -80° to +80° Vertical: -90° to +20°					
Browser GUI	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.				
	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)				
	One Shot Capture	A still picture will be displayed on a newly opened window.				
	GUI/Setup Menu Language	English, Italian, French, German, Spanish, Russian, Chinese, Japanese				
	System Log	Up to 100				
	Supported OS <sup>2 3</sup>	Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3				
	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), Microsoft® Internet Explorer® 6.0 SP3				
	Network	Network IF	10Base-T / 100Base-TX, RJ-45 connector			
		Image Resolution	Aspect ratio: [4 : 3]	WV-SF135: H.264: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps WV-SF132: H.264: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps		
				Aspect ratio: [16 : 9]	WV-SF135: H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps WV-SF132: H.264: 640 x 360 / 320 x 180, up to 30 fps JPEG: 640 x 360 / 320 x 180, up to 30 fps	
					H.264 <sup>1</sup>	
			Transmission Mode		Constant bitrate / Frame rate priority / Best effort	
Frame Rate			1 / 3 / 5 / 7.5 / 10 / 15 / 20 / 30 fps   1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps			
Bit Rate / Client			64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 8,192* kbps *H.264 mode only (WV-SF135)			
Image Quality		LOW / NORMAL / FINE				
Transmission Type		UNICAST / MULTICAST				
JPEG <sup>1</sup>		Image Quality	0 SUPER FINE / 1 FINE / 2 / 3 / 4 / 5 NORMAL / 6 / 7 / 8 / 9			
		Refresh Interval	LOW (10 steps: 0-9)			
		Transmission Type	0.1 fps ~ 30 fps			
		Transmission Type	PULL / PUSH			

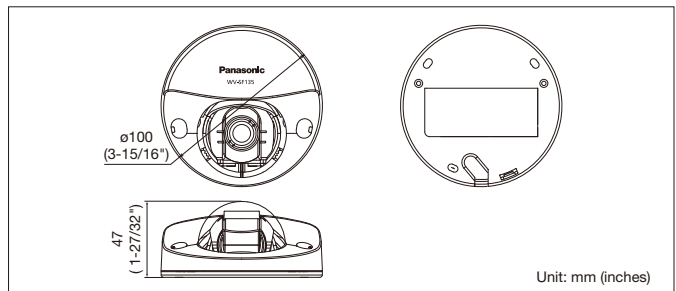
TV System		NTSC	PAL	
Network	Total Bit Rate	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited		
	Supported Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6 IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP		
	FTP Client	Alarm image transmission, FTP periodic transmission		
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)		
	Cellular Phone Compatibility	JPEG image, AUX control (by access level)		
	Mobile Terminal Compatibility	iPad, iPhone, iPod touch		
Alarm	Alarm Source	VMD, Command alarm		
	Alarm Actions	E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output		
	Alarm Log	1,000 logs		
	Schedule	VMD		
General	Safety/EMC Standard	UL (UL60950-1), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60950-1), DOC (ICES003 ClassA)	CE, IEC60950-1 (EN55022 ClassB, EN55024)	
	Power Source and Power Consumption	PoE (IEEE802.3af compliant) WV-SF135: PoE 48 V: 54 mA (Class1 device) WV-SF132: PoE 48 V: 46 mA (Class1 device)		
	Ambient Operating Temperature	0 °C ~ +40 °C (32 °F ~ 104 °F)		
	Ambient Operating Humidity	Less than 90 % (no condensation)		
	Dimensions	ø100 mm x 47 mm (H) (ø3-15/16" x 1-27/32" (H))		
	Mass (approx.)	200 g (0.44 lbs.)		
	Finish	Main Body: ABS resin, Sail White Dome Section: Clear Polycarbonate Resin		

- \*1 Transmission for 2 streams can be individually set in the same compression method.  
\*2 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®.  
\*3 When using IPv6 for communication, use Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.

## Part Names and Functions



## Appearance



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### Important

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

- All TV pictures are simulated.
- Masses and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.
- All product pictures are NTSC models.

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