



HD / 1,280 x 960 H.264 Network Camera featuring Super Dynamic

Key Features

- 720p HD images up to 30 fps
- Newly developed 1.3 Megapixel high sensitivity MOS Sensor
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by "UniPhier", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,280 x 960 image size
- **Super Dynamic** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared to conventional cameras.
- **Face Super Dynamic** Range technology ensures clear face image.
- H.264 and MPEG-4 are selectable for system migration.
- High sensitivity with Day/Night (IR) function:
WV-SW316L : 0.3 lx (Color), 0 lx (B/W) at F1.3 (Wide) when the IR LED is lit
WV-SW316 : 0.3 lx (Color), 0.05 lx (B/W) at F1.3 (Wide)
- Motorized varifocal lens equipped:
The zoom ratio can be changed and adjusted to an optional photographic area through the operation buttons on this unit and the setup menu.
- IR LED equipped: The equipped infrared LED makes it possible to take pictures at zero lx.(WV-SW316L)
- 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.
- ABF (Auto Back Focus) ensures easy installation.
- Digital Noise Reduction: 3D-DNR ensures noise reduction in various conditions.
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Up to 6.4x Extra Optical Zoom under VGA resolution.
3.1-10 mm, 3.2x vari-focal auto iris lens (3.1-20 mm (equivalent), 6.4x with Extra Optical Zoom (at VGA))
- VMD (Video Motion Detector) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Face detection function detects the position of human face and the information is sent by XML or video stream.
- Meta data for VMD is supplied to work with the WJ-NV200 /WJ-ND400 playback VMD function.
- Privacy Zone can mask up to 2 private areas, such as house windows and entrances/exits.
- Alarm sources including 1 terminal input, VMD and Panasonic alarm command can trigger actions such as SDHC/SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic 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.
- SDHC/SD Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- H.264/MPEG-4 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.
- 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
- Analog Monitor output for easier installation
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Dehumidification device for use in various weather conditions

Standard Accessories

• Installation Guide	1 pc.	• Camera fixing screw (M4 x 8)4 pcs. (of them, 1 for spare)
• CD-ROM*1	1 pc.	• Mount bracket cover screw (M3 x 6)3 pcs. (of them, 1 for spare)
• Code Label*2	1 pc.	• Adapter box (PAL model only).....	1 pc.
The followings are for installation.			
• 4P alarm cable.....	1 pc.	• Adapter box mounting screw	(M4 x 35) (PAL model only).....
• 2P power cable.....	1 pc.	• Mounting screws for adapter box /	camera mount bracket (M5 x 20)(PAL model only)
• Camera mount bracket	1 pc.	5 pcs. (of them, 1 for spare)
• Mount bracket cover	2 pc.		
• Waterproof tape	1 pc.		

*1 The CD-ROM contains the operating instructions (HTML, PDFs) 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 Accessory

Adapter Box
WV-Q120
(NTSC model only)



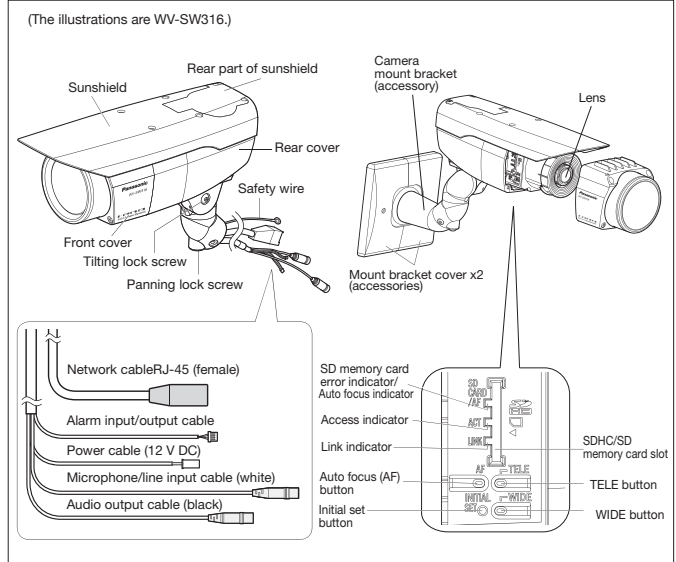
Specifications

TV System	NTSC	PAL
Camera		
Image Sensor	1/3 type MOS Sensor	
Effective Pixels	Approx. 1.3 megapixels	
Scanning Mode	Progressive scan	
Scanning Area	4.80 mm (H) x 3.60 mm (V) (3/16" (H) x 5/32" (V))	
Minimum Illumination	WV-SW316L: Color: 0.3 lx, B/W: 0 lx at F1.3 (Shutter: 1/30 s, AGC: High, when the IR LED is lit), Color: 0.019 lx, at F1.3 (Shutter: 16/30 s, AGC: High) WV-SW316: Color: 0.3 lx, B/W: 0.05 lx at F1.3 (Shutter: 1/30 s, AGC: High), Color: 0.019 lx, B/W: 0.003 lx at F1.3 (Shutter: 16/30 s, AGC: High)	
IR LED Light	WV-SW316L: Off/Auto(High/Mid/Low)	
IR LED irradiation distance	WV-SW316L: 15 m (49.21 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: Automatic integration of ALC and ELC Indoor [50 Hz]: Automatic integration of ALC and ELC (up to 1/100 s) Indoor [60 Hz]: Automatic integration of ALC and ELC (up to 1/120 s)	
Shutter Speed	Fix shutter: 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, 1/10,000 (only at Super-Dynamic Off)	
Super Dynamic	ON / OFF	
Face Super Dynamic	ON / OFF (Only at Super Dynamic: ON)	
Adaptive Black Stretch	ON / OFF (Only at Super Dynamic: OFF)	
AGC	ON (LOW, MID, HIGH) / OFF	
Electronic Sensitivity UP	OFF / AUTO (Max. 2x (2/30 s), 4x (4/30 s), 6x (6/30 s), 10x (10/30 s), 16x (16/30 s))	
Day & Night (IR)	Mode: AUTO1 / AUTO2 / ON / OFF, Level: High / Low, with external control	
Dynamic Range	52 dB typ. (Super Dynamic: On, Light control mode: indoor scene)	
Digital Noise Reduction	High / Low	
Video Motion Detection	4 areas, Sensitivity: 15 steps, Detection size: 10 steps	
Privacy Zone	Up to 2 zones, Gray	
VIOS	ON / OFF	
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks)	
Focus Adjustment	ABF / MANUAL	
Focal Length	3.1 mm - 10 mm, 3.2x (3.1-20 mm (equivalent)), 6.4x with Extra Optical Zoom (at VGA)	
Angular Field of View	H: 27.7° (TELE) - 100.3° (WIDE), V: 20.8° (TELE) - 73.6° (WIDE)	
Maximum Aperture Ratio	1: 1.3 (WIDE) - 1: 3.0 (TELE)	
Focusing Range	0.3 m - ∞	
Adjusting Angle	Horizontal: ±100° (Camera mount bracket) Vertical: +30°, -90° (Camera mount bracket)	
Browser GUI		
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	Still or motion Images recorded in the SDHC/SD memory card can be downloaded.	
GUI/Setup Menu Language	English, French, Italian, Spanish, German, Russian, Chinese, Japanese	
System Log	Up to 100 (Internal), Up to 4,000 (SDHC/SD memory when the recording format is set to JPEG) error logs	
Supported OS ^{1,2}	Microsoft® Windows® 7 Professional 64 bit/32 bit, Microsoft® Windows Vista® Business SP1 32 bit, Microsoft® Windows® XP Professional SP3	
Supported Browser	Windows® Internet Explorer® 8.0 32 bit (Microsoft® Windows® 7 Professional 64 bit/32 bit), Windows® Internet Explorer® 7.0 (Microsoft® Windows Vista® Business SP1 32 bit), Microsoft® Internet Explorer® 6.0 SP3 (Microsoft® Windows® XP Professional SP3)	
Network		
Network IF	10Base-T / 100Base-TX, RJ-45 connector	
Image Resolution ^{3,4}	Aspect ratio: [4:3] H.264: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps MPEG-4: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG (M-JPEG): 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps Aspect ratio: [16:9] H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG (M-JPEG): 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps	
H.264/MPEG-4 ^{5,6}	Transmission Mode: Constant bitrate / Framerate priority / Best effort Frame Rate: 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 Image Quality: LOW / NORMAL / FINE Refresh Interval: 0.2 s - 5 s Transmission Type: UNICAST / MULTICAST	
JPEG	Image Quality: 10 steps Refresh Interval: 0.1 fps - 30 fps Transmission Type: PULL / PUSH	
Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps	
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 / 2,048 / 4,096 / 8,192 kbps / Unlimited	
Supported Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP	
FTP Client	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDHC/SD memory card is available.)	
No. of Simultaneous Users	Up to 14 users (Depends on network conditions)	
SDHC/SD Memory Card (Option)	H.264 recording: Manual REC / Alarm REC (Pre/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC) card: Panasonic 256 MB, 512MB, 1 GB, 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB* model * SDHC card	
Face Detection	ON / OFF (with XML notification)	
Cellular Phone Compatibility	JPEG image, AUX control (by access level)	
Mobile Terminal Compatibility ⁷	iPad, iPhone, iPod touch (iOS 4.2.1 or later) Android™ mobile terminals	
Alarm		
Alarm Source	1 terminal input, VMD, Command alarm	
Alarm Actions	SDHC/SD memory recording, E-mail notification, Alarm terminal output, Indication on browser, FTP image transfer, Panasonic protocol output	
Alarm Log	With SDHC/SD memory card: 5,000 logs, without SDHC/SD memory card: 1,000 logs Schedule: Alarm / VMD / Access permission / H.264 recording / Forcible black & white mode (WV-SW316L) VBS: 1.0 V [p-g]/75 Ω, NTSC composite, RCA Jack VBS: 1.0 V [p-g]/75 Ω PAL composite, RCA Jack	
Input/ Output		
Monitor Output (for adjustment)	MIC IN and Line IN are selectable. ø3.5 mm stereo mini jack (monaural input) (Applicable microphone: Plug-in power type) Supply voltage: 2.5 V ±0.5 V Input impedance: approx. 2 kΩ	
Audio Output	ø3.5 mm stereo mini jack (monaural output) Line level	
External I/O Terminals	ALARM IN, DAY/NIGHT IN, ALARM OUT, AUX OUT	
General		
Safety/EMC Standard	UL (UL60950-1), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60950-1), DOC (ICES003 ClassA)	CE (EN55022 ClassB, EN55024)

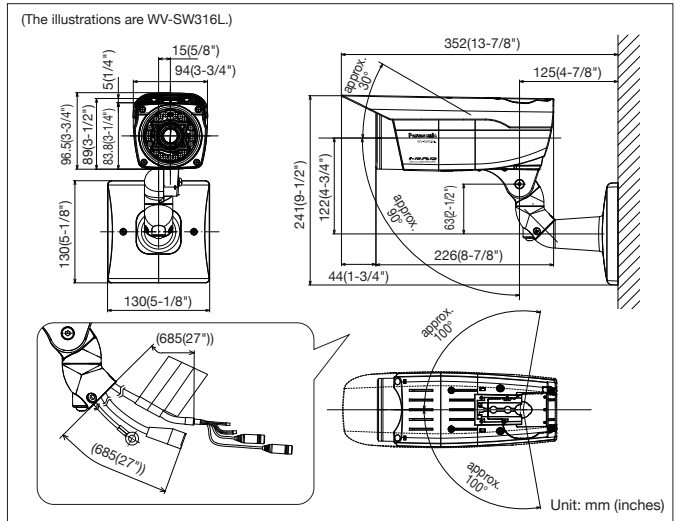
TV System	NTSC	PAL
General		
Power Source and Power Consumption	12 V DC: 850 mA * FOR UL LISTED MODEL(S), ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY. PoE (IEEE 802.3af compliant) 48 V: 200 mA (Class 0 device)	
Ambient Operating Temperature	-40 °C - +50 °C (-40 °F to 122 °F)	
Ambient Operating Humidity	90 % or less (without condensation)	
Water and Dust Resistance	IP66, IEC60529 measuring standard compatible	
Dimensions	94 mm (W) x 89 mm (H) x 226 mm (L) (3-7/10" (W) x 3-1/2" (H) x 8-7/8" (L))	
Mass (approx.)	1.4 kg (3.09 lbs.)	
Finish	Main body: Aluminum die cast/resin, metallic silver coating Front cover section clear part: Polycarbonate resin	

- *1 For further information about PC system requirements and precautions for when using Microsoft Windows 7, Microsoft Windows Vista, or Windows Internet Explorer, click "Manual" -> "Open" from the supplied CD-ROM and refer to "Notes on Windows / Internet Explorer versions". For information on the camera models of the supported operating systems, refer to our website (<http://panasonic.net/pss/security/support/index.html>).
- *2 When using IPv6 for communication, use Microsoft Windows 7 or Microsoft Windows Vista.
- *3 MPEG-4 is not supported. *4 [4 : 3] and [16 : 9] are alternative.
- *5 H.264 and MPEG-4 are alternative. *6 Transmission for 2 streams can be individually set in the same compression method.
- *7 For further information about compatible devices, refer to our website (<http://panasonic.net/pss/security/support/info.html>).

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 can not be responsible for network performance and/or other manufacturer products that reside on the network.
- Masses and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.

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