



## HD / 1,280 x 960 H.264 Pan-tilt Wireless Network Camera

### Key Features

- 720p HD images up to 30 fps
- 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
- Wide Dynamic Range and ABS (Adaptive Black Stretch) technologies deliver wider dynamic range compared with conventional cameras.
- Face Wide Dynamic Range technology ensures clear face image.
- High sensitivity with Day & Night (Electrical) function: 0.6 lx (Color), 0.5 lx (B/W) at F2.2
- 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.
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Indoor scene (50 Hz) / Indoor scene(60Hz) / 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.
- 2x extra zoom at VGA resolution
- 8x 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 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
- Pan-tilt and Preset Map Shot function realizes wide range monitoring.(Horizontal angle:180° Vertical angle 123°)
- Easy installation: Easy to adjust directions.
- Interactive communication with audio: By using the audio output connector and the microphone in connector, receiving audio from the cameras on a PC and transmitting audio from the PC to the cameras is available.
- IP55 rated water and dust resistant. Compatible with IEC60529
- Best effort on Transmission priority: In accordance with the network bandwidth, H.264 images will be transmitted with the bit rate varying between the maximum and minimum bit rates that are set for "Max bit rate (per client)".
- Smartphone monitoring : Direct camera control from smartphone
- Wireless LAN function (IEEE802.11 n/g/b) : Camera images can be monitored over a wireless router.
- WPS (Wi-Fi Protected Setup) function : WPS enables the camera to automatically obtain the connection configuration information and the security configuration information of the wireless router. WPS can be configured by pressing the WIRELESS button (WPS indicator) (PBC method) or entering an 8 digit pin code (Pin code method).

### Standard Accessories

• Installation Guide .....	1 pc.	• Foam Strip .....	1 pc.
• CD-ROM*1 .....	1 pc.	• Power cable plug .....	1 pc.
• Flexible Stand .....	1 pc.	• AC Adaptor (NTSC model only) .....	1 pc.
• Connector Cover .....	1 pc.	• AC Cord (NTSC model only).....	1 pc.
• Sunshade .....	1 pc.	• Extension Cord (NTSC model only).....	1 pc.

\*1 The CD-ROM contains the operating instructions and different kinds of tool software programs.

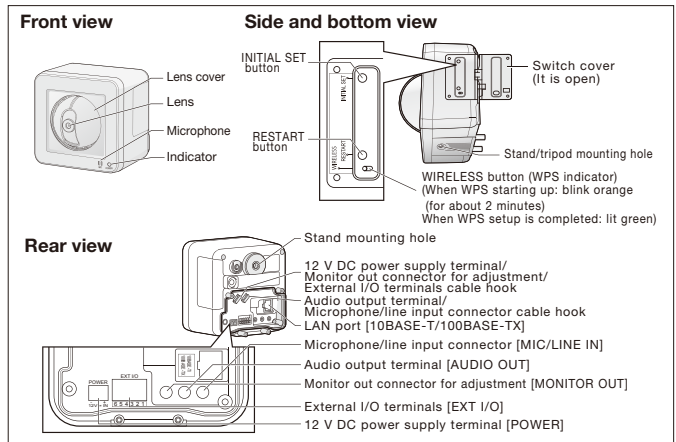
# Specifications

TV System	NTSC	PAL
<b>Camera</b>		
Image Sensor	1/4 type MOS Sensor	
Effective Pixels	Approx. 1.3 megapixels	
Scanning Mode	Progressive	
Scanning Area	3.52 mm (H) x 2.64 mm (V) (7/50" (H) x 1/10" (V))	
Minimum Illumination	Color: 0.6 lx (F2.2, Auto slow shutter: Off (1/30s), Gain:On(High)) <sup>1</sup> Color: 0.038 lx (F2.2, Auto slow shutter: Max. 16/30s, Gain:On(High)) <sup>1</sup> BW: 0.5 lx (F2.2, Auto slow shutter: Off (1/30s), Gain:On(High)) <sup>1</sup> BW: 0.031 lx (F2.2, Auto slow shutter: Off (16/30s), Gain:On(High)) <sup>1</sup>	
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	ELC (1/30 s), ELC (3/100 s), ELC (3/120 s), ELC (2/100 s), ELC (2/120 s), ELC (1/100 s), ELC (1/120 s), ELC (1/250 s), ELC (1/500 s), ELC (1/1,000 s), ELC (1/2,000 s), ELC (1/4,000 s), ELC (1/10,000 s)	
Wide Dynamic Range	ON / OFF	
Face Wide Dynamic Range	ON / OFF	
Adaptive Black Stretch	ON / OFF	
AGC	ON (HIGH) / ON (MID) / ON (LOW) / OFF	
Electronic Sensitivity UP	OFF (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	
Dynamic Range	24 dB typ. (WDR: ON, Light Control: ELC)	
Digital Noise Reduction	HIGH / LOW	
Video Motion Detection	ON / OFF, 4 areas available	
Privacy Zone	ON / OFF (up to 2 zones available)	
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks) , On/Off	
<b>Lens</b>		
Focal Length	1.95 mm	
Zoom Ratio	Extra zoom: 2x (at VGA resolution)	
Angular Field of View	Horizontal: 85°, Vertical: 68°	
Maximum Aperture Ratio	1 : 2.2	
Focusing Range	0.5 m - ∞	
<b>Pan and Tilt</b>		
Panning Range	-47.5° - +47.5°	
Panning Speed	Manual: Approx. 5°/s - 80°/s, Preset: Up to approx. 80°/s	
Tilting Range	-45° to +10°	
Tilting Speed	Manual: Approx. 5°/s - 80°/s, Preset: Up to approx. 80°/s	
Number of Preset Positions	64	
PTZ Position Display	ON / OFF	
Self Return	10 s/20 s/30 s/1 min/2 min/3 min/5 min/10 min/20 min/30 min/60 min	
Map Shot	Preset map-shot	
<b>Browser GUI</b>		
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, extra zoom(1x - 2x) and the electronic zoom (higher zoom factors, up to 16x).	
Zoom	Up to 20 alphanumeric characters	
Camera Title	Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)	
Clock Display	Reset	
Alarm Control	A still picture will be displayed on a newly opened window.	
One Shot Capture	Mic (Line) Input: ON / OFF Volume adjustment: Low / Middle / High, Audio Output: ON / OFF Volume adjustment: Low / Middle / High	
Audio	GUI/Setup Menu Language	
System Log	English, Japanese, Italian, French, German, Spanish, Chinese, Russian	
Supported OS <sup>2,3</sup>	Up to 100 (Internal) error logs	
Supported Browser	Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3	
<b>Wireless</b>		
Antenna 802.11n	1 x 1 (Diversity)	
Transmission system	SISO (Single Input/Single Output)-OFDM system, OFDM system, DSSS system	
Communication standard	International standard IEEE802.11 n / IEEE802.11 g / IEEE802.11 b compliant	
Frequency range/ Channel (center frequency)	WV-SW174W: IEEE802.11 n/g/b 2.412 GHz - 2.462 GHz (1 - 11ch)	WV-SW174WE: IEEE802.11 n/g/b 2.412 GHz - 2.472 GHz (1 - 13ch)
Data transfer rate <sup>4</sup>	IEEE802.11 n: 6.5 - 72.2 Mbps IEEE802.11 g: 6 - 54 Mbps IEEE802.11 b: 1 - 11 Mbps	
Access method	Infrastructure mode	
Authentication method	Open System	
Security <sup>5</sup>	WPA/WPA2-PSK (TKIP/AES) WEP (64 bit/128 bit)	
WPS	PBC method (push button method), PIN method (PIN code method)	
LED	Wireless (wireless status display)	
Interface	WIRELESS button (for setting up WPS with the PBC method)	
<b>Wireless hardware</b>		
Network IF	10Base-T / 100Base-TX, RJ-45 connector (female)	
Image Resolution <sup>6</sup>	Aspect ratio: [4 : 3] 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 Aspect ratio: [16 : 9] 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	
H.264	Transmission Mode: Constant bitrate / Framerate priority / Best effort / Advanced VBR 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 Image Quality: LOW / NORMAL / FINE Refresh Interval: 1 fps - 30 fps	
JPEG	Transmission Type: UNICAST / MULTICAST 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, DHCP6, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP	
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, panning/tilting/zoom control, AUX control (by access level)	
Mobile Terminal Compatibility <sup>7</sup>	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ mobile terminals	

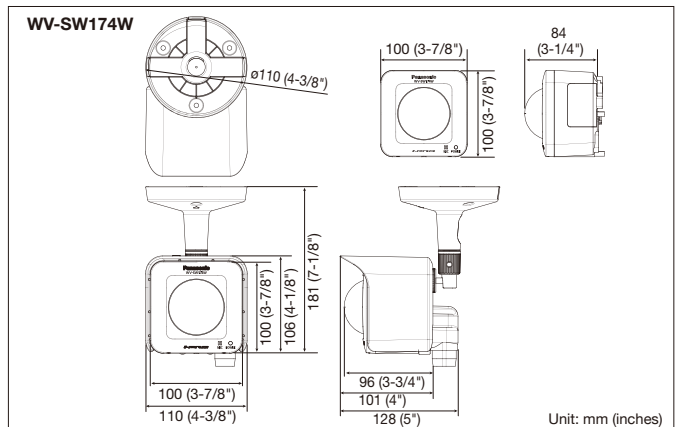
TV System	NTSC	PAL
<b>Alarm</b>		
Alarm Source	VMD, Command alarm	
Alarm Actions	E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output	
Alarm Log	1,000 logs	
Schedule	VMD	
<b>Input/ Output</b>		
Monitor Output (for adjustment)	VBS: 1.0 V [p-p]/75 Ω NTSC composite, ø3.5 mm mini jack	VBS: 1.0 V [p-p]/75 Ω PAL composite, ø3.5 mm mini jack
Microphone/Line Input	ø3.5 mm monaural mini jack, Input impedance: Approx. 2.2 kΩ	
For microphone input	Applicable microphone: Plug-in power type, Supply voltage: 3.3 V ±0.5 V	
For line input	Input level: Approx. -10 dBV	
Audio Output	ø3.5 mm stereo mini jack (monaural output), Output impedance: Approx. 560 Ω, Line level	
External I/O Terminals	ALARM IN 1, ALARM IN 2/ ALARM OUT, ALARM IN 3/ AUX OUT, GND, 12 V DC	
<b>General</b>		
Safety/EMC Standard	DOC (ICES003 ClassA) Wireless : FCC Part15C	CE, IEC60950-1 (EN55022 ClassB, EN55024) Wireless : EN300 328
Power Source and Power Consumption	12V DC , 510 mA	
Ambient Operating Temperature	-20 °C ~ +50 °C (-4 °F ~ 122 °F)	
Ambient Operating Humidity	Less than 90 % (no condensation)	
Water and Dust Resistance	Camera: IP55 (IEC60529) <sup>8</sup>	
Dimensions	100 mm (W) x 100 mm (H) x 84 mm (D) (3-47/50" x 3-47/50" (H) x 3-5/16" (excluding projection))	
Mass (approx.)	Main body 370 g (0.82 lbs)	
Finish	Main body: PC/ABS resin, silver 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> When using IPv6 for communication, use Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.  
<sup>4</sup> The actual line speed may be different depending on the network environment and the wireless devices connected.  
<sup>5</sup> Depending on the wireless access point (wireless router) used, connections may not be possible between the camera and the wireless. When connecting with 802.11n, select WPA-PSK(AES) or WPA2-PSK(AES) for security.  
<sup>6</sup> Transmission for 2 streams can be individually set in the same compression method.  
<sup>7</sup> For further information about compatible devices, refer to our website (<http://security.panasonic.com/pss/security/support/info.html>).  
<sup>8</sup> Only when installation work specified in this book is properly performed and appropriate waterproof treatment is performed.

## 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.

- 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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