



## 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
- Face detection function detects the position of human face and the information is sent by XML or video stream.
- Meta data for VMD works with the WJ-ND400 playback VMD function.
- 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
- Panning/tilting 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.

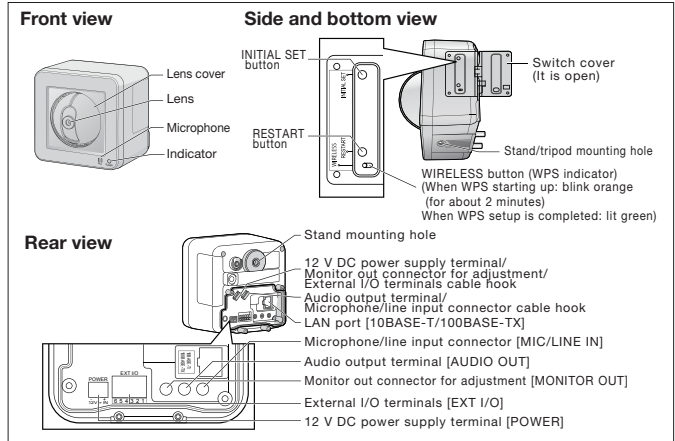
# Specifications

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)) 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)) Color: 0.031 lx (F2.2, Auto slow shutter: Off (16/30s), 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 (60 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 - ∞		
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	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		
	GUI/Setup Menu Language	English, Japanese, Italian, French, German, Spanish, Chinese, Russian		
	System Log	Up to 100 (Internal) error logs		
	Supported OS <sup>2,3</sup>	Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3		
	Supported Browser	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		
	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)	WW-SW174W: IEEE802.11 n/g/b 2.412 GHz - 2.462 GHz (1 - 11ch)	WW-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>Network</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 / 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	
		Image Quality	LOW / NORMAL / FINE	
	Refresh Interval	Transmission Type	UNICAST / MULTICAST	
		Transmission Type	UNICAST / MULTICAST	
	JPEG	Image Quality	10 steps	
		Refresh Interval	0.1 fps - 30 fps	
	Transmission Type	Transmission Type	PULL / PUSH	
		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, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, SMTP, DNS, NTP, 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)		
	Face Detection	ON / OFF (with XML notification)		
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			

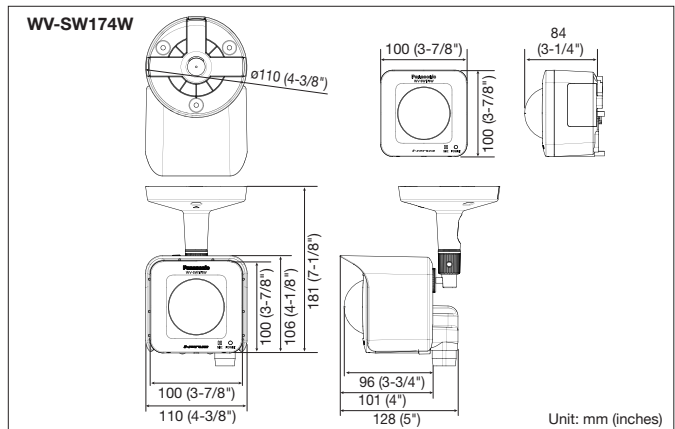
TV System	NTSC	PAL	
<b>Alarm</b>	Alarm Source	VMD, Command alarm	
	Alarm Actions	E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output	
	Alarm Log	1,000 logs	
	Schedule	VMD	
<b>Input/ Output</b>	Monitor Output (for adjustment)	VBS: 1.0 V [p-p]/75 Ω NTSC composite, 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" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.  
<sup>3</sup> When using IPv6 for communication, use 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://panasonic.net/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



### Trademarks and registered trademarks

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– iPad, iPhone and iPod touch are registered trademarks of Apple Inc.  
– UniPhier is a registered trademark of Panasonic Corporation.  
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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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<http://panasonic.net/security/>

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