Panasonic
ideas for life

360-degree Super Dynamic Vandal Resistant Dome Network Camera

WV-SW458
WV-SW458M

360-degree Vandal Resistant Network Camera featuring *Super Dynamic*

Key Features

- 360° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264/VGA)
- 1080p Full HD images up to 30 fps.
- Combining enhanced "UniPhier®", Panasonic's proprietary System LSI platform and ***2 areas VIQS*** (Variable Image Quality on Specified area) function can decrease maximum 50%*1 network bandwidth.
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by enhanced "UniPhier®.
- Smooth PTZ operation without mechanical action
- Built-in distortion correction function
- A fisheye lens control function realizes intelligible screen operation intuitively.
- Smartphone monitoring : Direct camera control from smartphone
- ***Super Dynamic*** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared to conventional cameras.
- High sensitivity with Day/Night (Electrical) function:1.5 lx (Color), 1.2 lx (B/W) at F2.4
- Digital Noise Reduction: 3D-DNR ensures noise reduction in various conditions.
- With the Intelligent Resolution technology, 3 areas - outlines, detailed texture areas and soft gradation areas - are automatically detected and optimum signal processes are performed to each area. Apart from the uniform enhancement of sharpness, the innovative technology Intelligent Resolution precisely performs signal processing pixel by pixel in the most effective way for it. As a result, images are naturally clear and crisp suitable for all surveillance applications.
- 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
- 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 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.
- Privacy Zone can mask up to 4 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 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.
- SDXC/SDHC/SD Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- 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.
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Dehumidification device for use in various weather conditions
- Operating temperature –40 °C ~ +50 °C (–40 °F ~ 122 °F)
- Vandal resistant mechanism for high reliability
- "Railway applications – Electronics equipment used on rolling stock" compatible with EN50155
- Low profile design for discrete installation

*1 Compared with WV-NP502, reduction effect is decreased by object and image quality setting conditions

Standard Accessories

- Installation Guide .....1 pc.
- CD-ROM*1 .....1 pc.
- Code label*2.....1 pc.

The following is used during installation procedures:

- Camera attachment .....1 pc.
- Base cover <SW458>.....1 pc.
- Mount bracket <SW458>.....1 pc.
- Installation template label <SW458M> ..... 1 pc.
- Waterproof tape ..... 1 pc.
- Fixing screws (M4 x 8 mm) <SW458> .....5 pcs. (of them, 1 for spare)
- 4P alarm cable ..... 1 pc.
- 2P power cable ..... 1 pc.
- Bit for tamperproof screw ..... 1 pc.

*1 The CD-ROM contains the operating installations and installation guide (PDF).
*2 This label may be required for network management. The network administrator shall retain the code label.

Specifications

TV System			NTSC	PAL
Camera	Image Sensor		1/3 type MOS Sensor	
	Effective Pixels		Approx. 3.1 megapixels	
	Scanning Mode		Progressive	
	Scanning Area		4.51 mm (H) × 3.38 mm (V) {3/16 inches (H) x 1/8 inches (V)}	
	Minimum Illumination		Color: 1.5 lx (F2.4, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.1 lx (F2.4, Auto slow shutter: Max. 16/30s, Gain:On(High)) *1 BW: 1.2 lx (F2.4, Auto slow shutter: Off (1/30s), Gain:On(High)) BW: 0.08 lx (F2.4, Auto slow shutter: Off (16/30s), Gain:On(High)) *1	
	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		With Super Dynamic On ELC (1/30 s) With Super Dynamic Off 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)	
	Super-Dynamic		ON / OFF	
	Dynamic Range		52 dB typ. (only at Super-Dynamic On)	
	Adaptive Black Stretch		On/Off (only at Super-Dynamic 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	
	Digital Noise Reduction		HIGH / LOW	
	Video Motion Detection		ON / OFF, 4 areas available	
	Video analytics Face Detection		Off/On/On with face frame display However, face detection is not supported when "Fisheye" or "Quad streams" is selected for the image type.	
	Auto mode:		Auto pan/ Preset sequence Auto mode can only be used when the image type is Quad PTZ or Single PTZ.	
	Self return:		10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min/ 10 min/ 20 min/ 30 min/ 60 min Self return can only be used when the image type is Quad PTZ or Single PTZ.	
	Privacy Zone		ON / OFF (up to 4 zones available)	
	VIQS		On/Off (up to 2 areas available) However, the VIQS function is not supported when "Quad PTZ", Single PTZ" or "Quad streams" are selected.	
	Camera Title (OSD)		Up to 20 characters (alphanumeric characters, marks) , On/Off However, you can specify characters to be displayed on each of the four screens when "Quad streams" is selected.	
Lens	Focal Length		0.837 mm	
	Angular Field of View		Horizontal: 182 °, Vertical: 176 °	
	Maximum Aperture Ratio		1:2.4 (Fixed)	
	Focusing Range		0.3 m ~ ∞	
Browser GUI	Camera Control		Pan/Tilt/Digital Zoom, Preset, Auto Mode, Self Return, Fisheye 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 (Panorama, Double Panorama, Fisheye mode) 1x ~4x (Quad PTZ or Single PTZ mode)	
	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 SDXC/SDHC/SD memory card can be downloaded.	
	GUI/Setup Menu Language		English, Italian, French, German, Spanish, Russian, Chinese, Japanese	
	System Log		Up to 100 (Internal), Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs	
	Supported OS *2 *3		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	
Network	Network IF	WV-SW458	10Base-T / 100Base-TX, RJ-45 connector (female)	
		WV-SW458M	10Base-T / 100Base-TX, M12 connector (male)	
	Image Resolution *4	2M Panorama [16:9]/ 2M Double Panorama [16:9]:	H.264(1): 1920x1080 / 640x360 / 320x180, up to 30 fps H.264(2): 640x360/320x180, up to 30 fps JPEG: 1920x1080/640x360/320x180, up to 30 fps	
		1M Panorama [16:9]/ 1M Double Panorama [16:9]:	H.264(1): 1280x720 / 640x360 / 320x180, up to 30 fps H.264(2): 640x360/320x180, up to 30 fps JPEG: 1280x720/640x360/320x180, up to 30 fps	
		Panorama + Quad PTZ/ Panorama + Single PTZ/ Double Panorama + Quad PTZ/ Double Panorama + Single PTZ:	• When using distribution of "Panorama" or "Double panorama" H.264(1): 1920x1080/640x360/320x180, up to 15 fps JPEG: 1920x1080/640x360/320x180, up to 15 fps • When using distribution of "Quad PTZ" or "Single PTZ" H.264(2): 1280x960/640x480/320x240, up to 15 fps JPEG: 1280x960/640x480/320x240, up to 15 fps	
		VGA Quad streams	Ch1-Ch4 640x480 max.30 fps * Only for H.264 images. * There are specification limitations such as the SD memory card function being unavailable.	
		3M Fisheye [4:3]:	H.264(1): 1280x960, up to 15 fps JPEG: 2048x1536, up to 15 fps	
		1.3M Fisheye [4:3]:	H.264(1): 1280x960 / 640x480 / 320x240, up to 30 fps H.264(2): 640x480 / 320x240, up to 30 fps JPEG: 1280x960 / 640x480 / 320x240, up to 30 fps	
	H.264	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 / 10,240 / 12,288 / 14,336 kbps	
		Image Quality	LOW / NORMAL / FINE	
		Refresh Interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 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, RTSP, RTP, RTP/RTCP,FTP, SMTP, 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 SD memory card is available.)	
	No. of Simultaneous Users		Up to 14 users (Depends on network conditions)	

TV System			NTSC	PAL
Network	SDXC/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/SDXC) card: Panasonic 1 GB, 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64 GB** model *SDHC card, ** SDXC card (except miniSD card and microSD card)	
	Face Detection		ON / ON with face frame display / OFF (with XML notification) *"3M Fisheye [4:3]", "1.3M Fisheye [4:3]", and "VGA Quad streams" modes cannot use the Face Detection function.	
	Cellular Phone Compatibility		JPEG image, AUX control (by access level)	
	Mobile Terminal Compatibility		iPad, iPhone, iPod touch (iOS 4.2.1 or later) Android™ mobile terminals	
Alarm	Alarm Source		3 terminals input, VMD, Command alarm	
	Alarm Actions		SDXC/SDHC/SD memory recording, E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output	
	Alarm Log		With SDXC/SDHC/SD memory card: 5,000 logs, without SDXC/SDHC/SD memory card: 1,000 logs	
	Schedule		Alarm / VMD / Access permission / H.264 recording	
Input/ Output	Microphone/Line Input		ø3.5 mm monaural mini jack, Input impedance: Approx. 2 kΩ	
		For microphone input	Applicable microphone: Plug-in power type, Supply voltage: 2.5 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. 600 Ω, Line level	
	External I/O Terminals		ALARM IN 1, ALARM IN 2/ ALARM OUT, ALARM IN 3/ AUX OUT (x1 for each)	
General	Mounting method		Ceiling/ Wall	
	Safety/EMC Standard		UL (UL60950-1), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60950-1), DOC (ICES003 ClassA)	SW458 CE,IEC60950-1(EN55022 ClassB,EN55024) SW458M CE,IEC60950-1(EN55022 ClassA,EN55024)
	Power Source and Power Consumption		12V DC, PoE (IEEE802.3af compliant) / 12 V DC*: 540 mA/ 6.5 W / PoE 48 V: 125 mA/ 6.0 W (Class 2 devices) *FOR UL LISTED MODEL(S), ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY.	
	Ambient Operating Temperature		-40 °C ~ +50 °C (-40 °F ~ 122 °F)	
	Ambient Operating Humidity		Less than 90 % (no condensation)	
	Water and Dust Resistance		Camera: IP66 (IEC60529) *5	
	Shock Resistance		Compliant with 50 J (IEC 60068-2-75)/IK10 (IEC 62262)	
	Railway Application		EN50155, EN50121	
	Dimensions	WV-SW458	Main body:ø154 mm x 50.5 mm (H) {ø6-1/16 inches x 2 inches (H)} Including the mount bracket:ø164 mm x 88 mm (H) {ø6-15/32 inches x 3-15/32 inches (H)} 191.5 mm (W){7-17/32 inches (W)} (including projection of the base cover fixing screw)	
		WV-SW458M	ø154 mm x 50.5 mm (H) {ø6-1/16 inches x 2 inches (H)}	
	Mass (approx.)	WV-SW458	Approx. 1.1 kg {2.43 lbs} (including the camera attachment and the mountbracket)	
		WV-SW458M	Approx. 0.8 kg {1.76 lbs} (including the camera attachment)	
	Finish		Main body: Aluminum die cast, light gray Dome section: Clear polycarbonate resin	

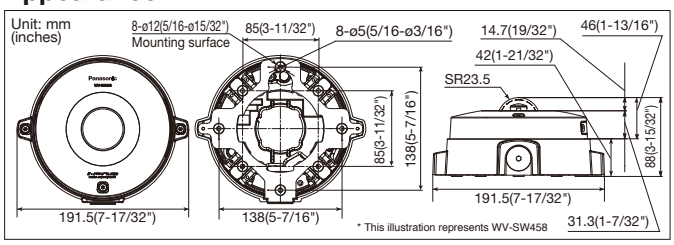
*1 Converted value
*2 Refer to "Notes on Windows Vista® / Windows® 7" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.
*3 When using IPv6 for communication, use Microsoft® Windows® 7 or Microsoft® Windows Vista®.
*4 Transmission for 2 streams can be individually set in the same compression method.
*5 Only when installation work specified in this book is properly performed and appropriate waterproof treatment is performed.
* When the camera is faced toward spot light or other bright lights and light reflecting objects, ghost image may appear.

Part Names and Functions

① Dome Cover
② Camera Fixing Screw
③ Enclosure
④ SD Memory Card Slot Cover
⑤ Network Cable
⑥ RJ-45 Connector (Female) <WV-SW458>
⑦ M12 Connector (Male) <WV-SW458M>
⑧ Alarm Input/Output Cable
⑨ Power Cable (12 V DC)
⑩ Microphone/line Input Cable (White)
⑪ Audio Output Cable (Black)
⑫ Camera Attachment (Accessory)
⑬ Direction Marker For Installation
⑭ Mount Bracket (Accessory) <WV-SW458>
⑮ Cap For The Female Thread For The Conduit <WV-SW458>
⑯ Base Cover (Accessory) <WV-SW458>
⑰ SD Memory Card Slot Cover
⑱ SD Memory Card Slot
⑲ Initial Set Button
⑳ Access Indicator (Blinks When Accessing)
㉑ Link Indicator (Lit When Linking)
㉒ SD Memory Card Error Indicator

* This illustration represents WV-SW458,WV-SW458M.

Appearance



* This illustration represents WV-SW458

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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.
• All product pictures are NTSC models.

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