



HD / 1,280 x 960 H.264 Vandal Resistant Network Camera featuring Super Dynamic (WV-SW155)
SVGA / 800 x 600 H.264 Vandal Resistant Network Camera featuring Super Dynamic (WV-SW152)

Key Features

- 720p HD images up to 30 fps (WV-SW155)
- 1.3 Megapixel high sensitivity MOS Sensor
- Super high resolution at SVGA/800 x 600 created by 1.3 Megapixel high sensitivity MOS Sensor (WV-SW152)
- 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 (WV-SW155)
- Full frame (Up to 30 fps) transmission at SVGA (800 x 600) image size (WV-SW152)
- **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.
- High sensitivity with Day & Night (Electrical) function:
 - 0.8 lx (Color), 0.6 lx (B/W) at F2.2 (WV-SW155)
 - 0.6 lx (Color), 0.4 lx (B/W) at F2.2 (WV-SW152)
- 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.
- 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.
- 2x extra zoom at VGA resolution
- 2x, 4x 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.
- 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.
- ONVIF compliant model
- Low profile design for discrete installation
- "Railway applications – Electronics equipment used on rolling stock" compatible with EN50155
- Wide coverage (Horizontal: 104 °, Vertical: 85 °)
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Vandal resistant mechanism for high reliability

Standard Accessories

• Installation Guide	1 pc.	• Mount Bracket.....	1 pc.
• Important Safety Instructions.....	1 pc.	• Tamperproof Screw Bit	1 pc.
• CD-ROM*1	1 pc.	• Waterproof Tape	1 pc.
• Code Label*2	1 pc.		
• Lens adjuster.....	1 pc.		

The followings are for installation.

• Fixing Screws (M4 x 8 mm)	3 pcs.
• 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.

Specifications

TV System	NTSC	PAL
Camera	1/3 type MOS Sensor	
Effective Pixels	Approx. 1.3 megapixel	
Scanning Mode	Progressive	
Scanning Area	4.8 mm (H) x 3.6 mm (V) (3/16" (H) x 5/32" (V))	
Minimum Illumination	WV-SW155: Color: 0.8 lx (F2.2, Auto slow shutter: Off (1/30s), Gain: On (High)) 0.05 lx (F2.2, Auto slow shutter: Max. 16/30s, Gain: On (High)) *1 WV-SW152: Color: 0.6 lx (F2.2, Auto slow shutter: Off (1/30s), Gain: On (High)) 0.04 lx (F2.2, Auto slow shutter: Max. 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	
Face Super Dynamic	ON / OFF (Only at Super Dynamic: ON)	
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	52 dB typ. (Super Dynamic: 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)	
VIQS	ON / OFF	
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks), On/Off	
Focus Adjustment	MANUAL	
Lens	Focal Length 1.95 mm	
Zoom Ratio	1x / Extra zoom: 2x (at VGA resolution)	
Angular Field of View	Horizontal: 104 °, Vertical: 85 °	
Maximum Aperture Ratio	1 : 2.2	
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. SD Memory Still or motion Images recorded in the SDHC/SD memory card can be downloaded. Data Download GUI/Setup Menu Language English, Italian, French, German, Spanish, Chinese, Russian, 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 *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-SW155 / WV-SW152 10Base-T / 100Base-TX, RJ-45 connector (female) WV-SW155M / WV-SW152M 10Base-T / 100Base-TX, M12 connector (male)	
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 JPEG: 1,280 x 960 / 640 x 480 / 320 x 240, up to 30 fps WV-SW152: H.264: 800 x 600 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: 800 x 600 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps Aspect ratio: [16 : 9] WV-SW155: 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-SW152: 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/MPEG-4 *5 *6	Transmission Mode Constant bitrate / Framerate 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-SW155) Image Quality LOW / NORMAL / FINE Transmission Type UNICAST / MULTICAST	
JPEG	Image Quality 10 steps Refresh Interval 0.1 fps ~ 30 fps Transmission Type PULL / PUSH	
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, RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP	

TV System	NTSC	PAL
Network	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) Manufactured by Panasonic SDHC memory card: 4 GB, 8 GB, 16 GB, 32 GB SD memory card: 256 MB, 512 MB, 1 GB, 2 GB except miniSD card and microSD card Face Detection ON / OFF (with XML notification) Cellular Phone Compatibility JPEG image Mobile Terminal Compatibility iPad, iPhone, iPod touch	
Alarm	Alarm Source VMD, Command alarm Alarm Actions SDHC/SD memory recording, E-mail notification, 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 VMD	
General	Safety/EMC Standard UL (UL60950-1), FCC (Part15 ClassA), CE, IEC60950-1 (EN55022 ClassB, EN55024) C-UL (CAN/CSA C22.2 No.60950-1), DOC (ICES003 ClassA) Power Source and Power Consumption PoE (IEEE802.3af compliant) / PoE 48 V: 56 mA (Class 1 device) Ambient Operating Temperature -30 °C ~ +50 °C (-22 °F ~ 122 °F) Ambient Operating Humidity Less than 90 % (no condensation) Impact Protection IEC 60068-2-75 test Eh, 50 J / IEC 62262 IK10 Water and Dust Resistance Camera: IP66 (IEC60529) *5 Railway Application EN50155, EN50121 Dimensions ø109 mm x 47 mm (H) (ø4-9/32" x 1-27/32" (H)) Mass (approx.) 350 g (0.77 lbs.) Finish Main body: Aluminum die cast, light gray, Dome section: Clear polycarbonate resin	

*1 Converted value

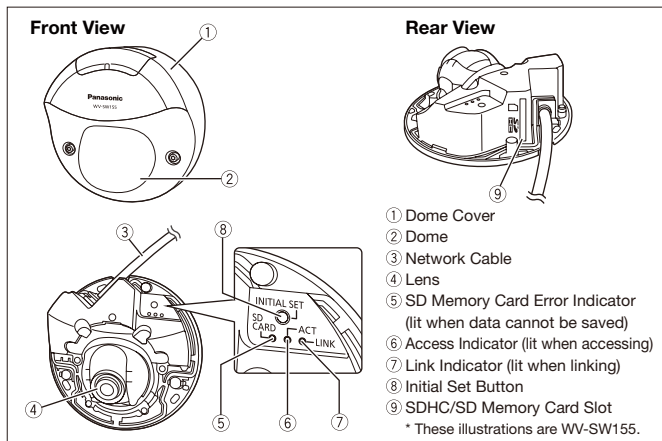
*2 Refer to "Notes on Windows Vista® / Windows® 7 on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®."

*3 When using IPv6 for communication, use Microsoft® Windows® 7 or Microsoft® Windows Vista®.

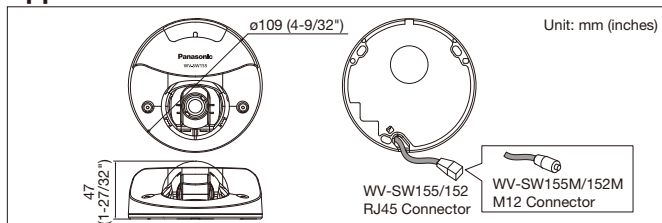
*4 Transmission for 2 streams can be individually set in the same compression method.

*5 Only when installation work specified in this book is properly performed and appropriate waterproof treatment is performed.

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.

- 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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