# Panasonic
## ideas for life

**Super Dynamic HD Vandal Resistant Dome Network Camera**
# WV-SW155 / WV-SW155M
**Super Dynamic Vandal Resistant Dome Network Camera**
# WV-SW152 / WV-SW152M



**WV-SW155/WV-SW152**

**Front View**

WV-SW155/WV-SW152

i-PRO SmartHD

MEGA Super Dynamic (WV-SW155)

Super Dynamic (WV-SW152)

ONVIF (WV-SW155)

IP66 standard | HD High Definition 720 | Vandal Resistant

H.264 JPEG | Face Detection | day/night

## 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.
- Important Safety Instructions........1 pc.
- CD-ROM*1 .....................................1 pc.
- Code Label*2 .................................1 pc.
- Lens adjuster................................1 pc.
- Plastic cover..................................1 pc.
- Mount Bracket...............................1 pc.
- Tamperproof Screw Bit .................1 pc.
- Waterproof Tape ...........................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.

### Optional Accessories

Smoke Dome Cover
**WV-CW6S**

# Specifications

## TV System

| Camera | | NTSC | PAL |
|---|---|---|---|
| Camera | Image Sensor | 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) × 5/32" (V)) | |
| | Minimum Illumination | WV-SW155:<br>Color: 0.8 lx (F2.2, Auto slow shutter: Off (1/30s), Gain: On (High))<br>0.05 lx (F2.2, Auto slow shutter: Max. 16/30s, Gain: On (High)) *1<br>WV-SW152:<br>Color: 0.6 lx (F2.2, Auto slow shutter: Off (1/30s), Gain: On (High))<br>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) | |
| | Shutter Speed — 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 °<br>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 Data Download | Still or motion Images recorded in the SDHC/SD memory card can be downloaded. | |
| | 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) | |
| | Network IF — WV-SW155M / WV-SW152M | 10Base-T / 100Base-TX, M12 connector (male) | |
| | Image Resolution *3 *4 — Aspect ratio: [4 : 3] | WV-SW155:<br>H.264: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps<br>JPEG: 1,280 x 960 / 640 x 480 / 320 x 240, up to 30 fps<br>WV-SW152:<br>H.264: 800 x 600 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps<br>JPEG: 800 x 600 / VGA (640 × 480) / QVGA (320 x 240), up to 30 fps | |
| | Image Resolution *3 *4 — Aspect ratio: [16 : 9] | WV-SW155:<br>H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps<br>JPEG: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps<br>WV-SW152:<br>H.264: 640 x 360 / 320 x 180, up to 30 fps<br>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 | |
| | H.264/MPEG-4 *5 *6 — Frame Rate | 1 / 3 / 5 / 7.5 / 10 / 15 / 20 / 30 fps | 1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps |
| | H.264/MPEG-4 *5 *6 — 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) | |
| | H.264/MPEG-4 *5 *6 — Image Quality | LOW / NORMAL / FINE | |
| | H.264/MPEG-4 *5 *6 — Transmission Type | UNICAST / MULTICAST | |
| | JPEG — Image Quality | 10 steps | |
| | JPEG — Refresh Interval | 0.1 fps ~ 30 fps | |
| | JPEG — 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<br>IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP | |

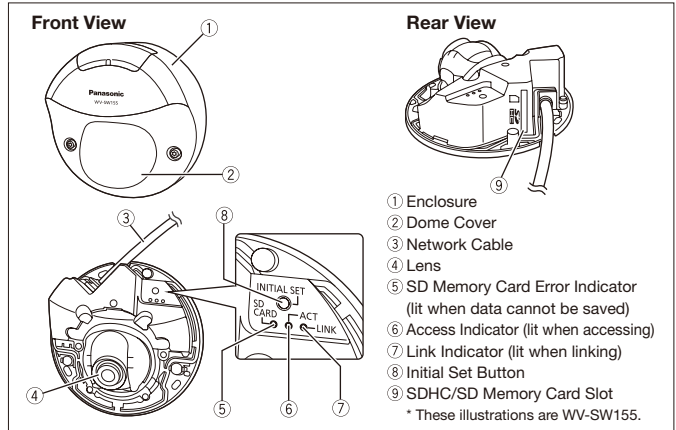| TV System | | NTSC | PAL |
|---|---|---|---|
| Network | FTP Client | Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDHC/SD memory card is available.) | |
| | No. of Simultaneous Users | Up to 14 users (Depends on network conditions) | |
| | SDHC/SD Memory Card (Option) | Manufactured by Panasonic<br>SDHC memory card: 4 GB, 8 GB, 16 GB, 32 GB<br>SD memory card: 256 MB, 512 MB, 1 GB, 2 GB<br>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)<br>C-UL (CAN/CSA C22.2 No.60950-1),<br>DOC (ICES003 ClassA) | CE, IEC60950-1<br>(EN55022 ClassB, EN55024) |
| | 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))<br>With Mount Bracket: ø109 mm x 70 mm (H) (ø4-9/32" x 2-3/4" (H)) | |
| | Mass (approx.) | 350 g (0.77 lbs.)   With Mount Bracket: 410 g(0.9 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®.
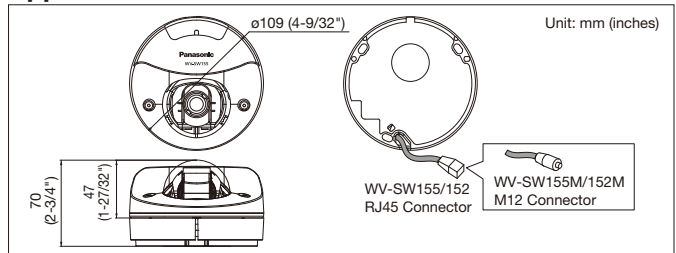*4 Transmission for 2 streams can be individually set in the same compression method.
*5 Only when installation work specified in this book is properly performed and appropriate waterproof treatment is performed.

## Part Names and Functions

**Front View**



**Rear View**



① Enclosure
② Dome Cover
③ Network Cable
④ Lens
⑤ SD Memory Card Error Indicator (lit when data cannot be saved)
⑥ Access Indicator (lit when accessing)
⑦ Link Indicator (lit when linking)
⑧ Initial Set Button
⑨ SDHC/SD Memory Card Slot
  * These illustrations are WV-SW155.

## Appearance



ø109 (4-9/32")
Unit: mm (inches)
70 (2-3/4")
47 (1-27/32")

WV-SW155/152 RJ45 Connector
WV-SW155M/152M M12 Connector

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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.