

# Panasonic

360-degree  
Super Dynamic  
Dome Network Camera  
Series



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- Unauthorized use of products by a third party.
- Interference or suspension of use of products by third party.

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# i-PRO SmartHD

# What's i-PRO SmartHD ?



A smart investment with more than just video surveillance

## One Panasonic

Wider Selection,  
Higher performance

## SmartHD Package

SmartHD Package that  
Suits for Every User

## IP Migration

Seamless Operation  
between Analog / IP devices

The 360° camera is an i-PRO SmartHD network camera that incorporates the following features

# 360° Super Dynamic Network Camera



**1 High resolution 3M / 1.3 Megapixel 360° image capture**

**2 Camera unit is equipped with image correction for various display modes and wide lens distortion compensation.**

**3 Diverse image distribution modes** (1) Panorama mode (2) Double panorama mode (3) 4-Screen

**4 Supports 4-stream distribution mode** One 360° camera independently distributes 4 images

## 360° monitoring using various image display modes

This i-PRO SmartHD camera series is equipped with a fisheye lens that enables full 360-degree monitoring. The camera have various display modes that can be switched according to the monitoring target and installation environment.

### Wide range of image modes

Select the ideal image mode based on what you want to monitor and where the camera is installed.

#### Double Panorama Mode

When the camera is installed on the ceiling the entire area under the camera is displayed as two 180° panoramic images.



#### Panorama Mode

When the camera is installed on a wall, the 180° area in front of the camera is displayed as a panoramic image. Blind spots that occur at the left and right sides of the image when using a 104° horizontal wide-angle camera (WV-SW155) are captured clearly.



WV-SF438 (Horizontal 188°)



WV-SW155 (Horizontal 104°)

#### Quad PTZ Mode

Four VGA size (640 x 480pixels) image displayed on one screen. Images in all four directions from the camera installation location are displayed on one screen. You can move a display area to a new position on the screen by clicking and dragging, display a 360° fisheye image at the side, and change the order of the screens by dragging and dropping the screen numbers (1-4 in the photo on the right.)



#### Single PTZ Mode

Displays one quad VGA size (1280 x 960 pixels) image. You change the display area by clicking the area you want to see in the image.



#### Fisheye Mode

Displays full 360° fisheye images, enabling monitoring without blind spots. Shooting in all directions means that the path of everyone walking beneath the camera can be monitored. Images can be displayed in 3Mbps or 1.3Mbps modes.



#### 4 Stream Mode

Four VGA size (640 x 480 pixels) images are transmitted. The operator sets the orientation beforehand.



Additionally, the double panorama mode and Quad / Single PTZ mode, or the panorama mode and Quad / Single PTZ mode can be transmitted simultaneously (maximum 15 fps).

### Built-in Image and Distortion Correction

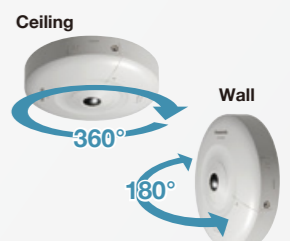
Images captured by the fisheye lens are converted to display images for each of the modes using correction on the camera unit. This reduces the burden placed on the monitoring PC or recorder and enables smoother image monitoring. The camera is equipped with distortion correction to enable a more natural display of wide angle images.

### Installation Method

Can be installed on ceilings, walls

	Double Panorama	Panorama	Quad/Single PTZ	4 Stream
Ceiling	✓	—	✓	✓
Wall	—	✓	✓	—

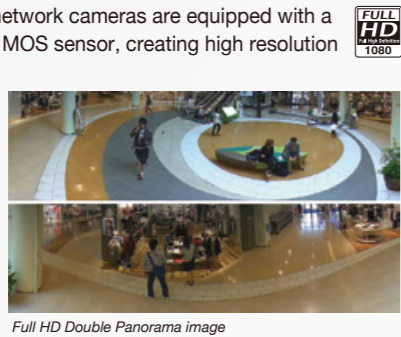
\*Functions marked with "—" may be available depending on how the camera is used.



# Main Features

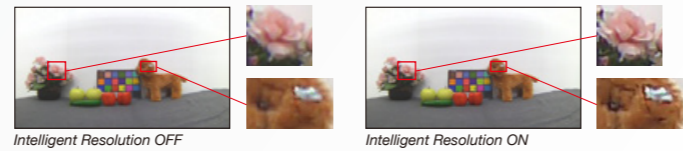
## High Resolution (1080p Full HD images to 30fps)

i-PRO SmartHD 360-degree network cameras are equipped with a 3.1 megapixel high sensitivity MOS sensor, creating high resolution 3 megapixel JPEG (2048 x 1536) and Panasonic high profile H.264 compression Full HD (1920 x 1080) 30fps images to meet a wide range of surveillance requirements. JPEG/H.264 multiple streaming transmission is also supported.



## Intelligent Resolution Technology

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.



## 2-area VIQS (Variable Image Quality on Specified Area)



The data volume of the overall video can be reduced by filming sections with movement that need to be monitored in high resolution while filming unchanging sections in low resolution. Two areas (up to 40% of the overall image) can be indicated as high-resolution monitoring sections. Combined with enhanced "UniPhier", Panasonic's proprietary System LSI platform, 2-area VIQS function can decrease the required network bandwidth by a maximum of 50%\*.

\* Compared with WV-NP502. Reduction effects may differ depending on the object and image quality setting conditions.

## Super Dynamic Function & Face Detection

The Mega Super Dynamic function corrects illumination difference in images, making it easier to see objects when monitoring and recording. It also detects human faces and makes them easy to identify.

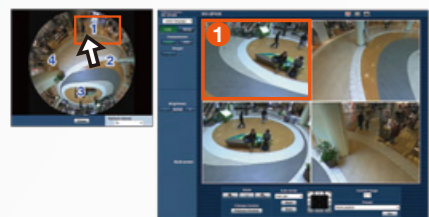


## Smartphone Monitoring

Monitoring can even be done from smart phones or tablet computers. The image is optimized for the screen size, making it possible to monitor an area while away or in transit.

\* iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ mobile terminals For further information about compatible devices, refer to our web site (<http://panasonic.net/pss/security/support/info.html>).

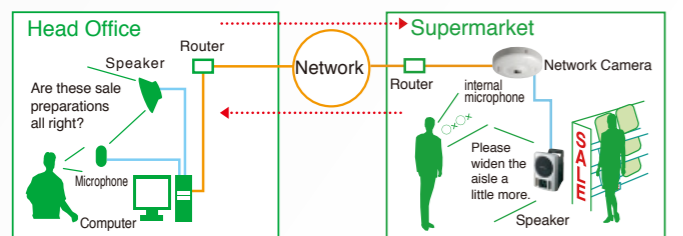
## Smooth PTZ operation without mechanical action



You can change the display area within the 360° image to achieve the same effects as those obtained by a pan or tilt function. Since these operations are not performed mechanically, the image operation is smoother than conventional mechanical pan or tilt functions. Additionally, changing the orientation of the lens on conventional pan and tilt cameras affects the recorded images and areas displayed for other users, whereas such operations on this camera do not affect the monitoring images of other users and enable continuous recording. In the Quad PTZ Mode, you can set one of the screens to auto pan mode for "endless panning" (displaying the full area while rotating the shooting range). You can also set up to 16 preset positions for rotational patrolling.

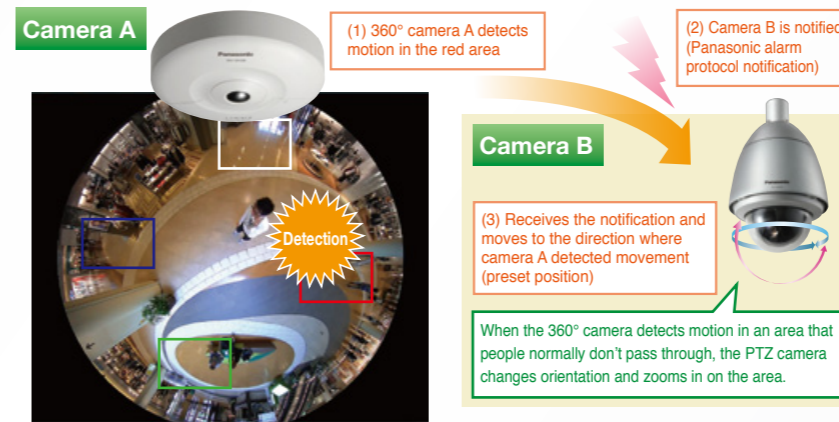
[http://www.youtube.com/watch?feature=player\\_embedded&v=tEOoBa2xGyQ](http://www.youtube.com/watch?feature=player_embedded&v=tEOoBa2xGyQ)

## Two-way audio



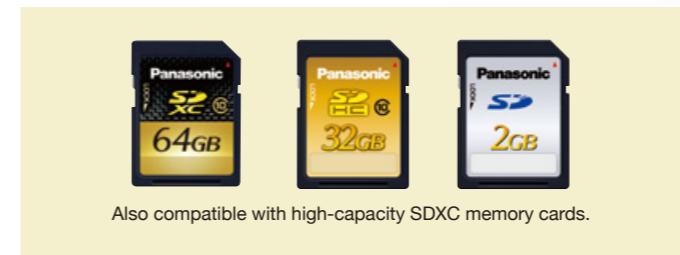
The camera unit features a built-in microphone (WV-SF438). Sounds occurring within the range of the camera can be monitored and recorded together with the images. In addition, two-way communication can be achieved by connecting a speaker with built-in amplifier to the camera connection terminal and a microphone to the computer. The same functions can be achieved with the WV-SW458/WV-SW458M models by connecting an external microphone to the connection terminals. This system is ideal for uses such as monitoring storefronts and communicating with local staff from a head office computer.

## Motion Detection + Panasonic alarm protocol notification (Link with PTZ camera etc.)



Four areas within the image captured by the camera can be set as motion detection areas, and the camera operation can also be set when motion is detected in any of the four areas. For example, the PTZ camera closest to the location where motion was detected can be notified (Panasonic alarm protocol notification), and can alter its orientation to zoom in on the area where motion was detected. Linking operation with other cameras in this way provides even more efficient and effective monitoring.

## SDXC Memory Card Compatible

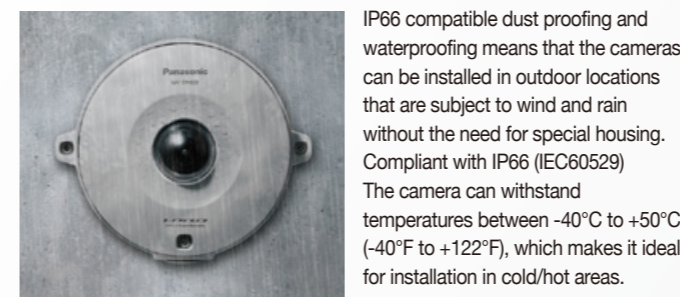


The built-in SD memory card slot enables recording of camera images directly onto the SD memory instead of via the network. It also enables image recording when an alarm is detected, and recording of images if a network error occurs or if images cannot be transmitted to the recorder for any reason.

## Vandal Resistant Mechanism (WV-SW458/WV-SW458M)



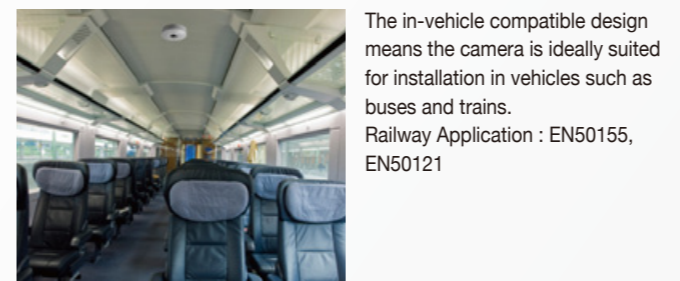
## IP66 Compatible (WV-SW458/WV-SW458M)



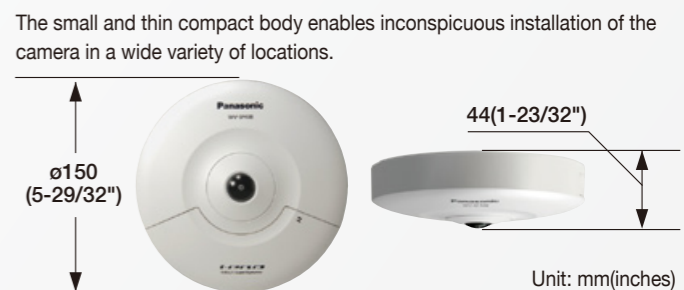
## Dehumidifier (WV-SW458/WV-SW458M)



## In-vehicle Compatible (WV-SW458/WV-SW458M)

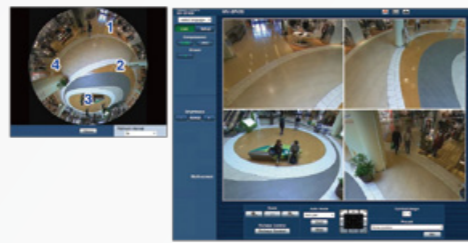
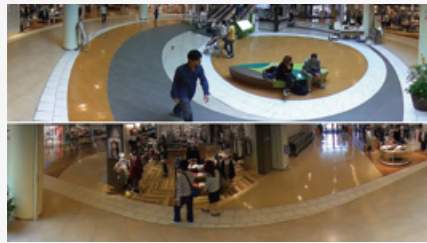


## Small and thin compact body



## Examples of Use in Different Industries

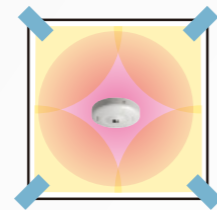
### Shopping Malls & Stores



Installation on the roof of halls or corridor Intersections enables 360° monitoring of people's movements beneath the camera. Multiple cameras can be installed in ideal locations for monitoring busy stores and corridors.

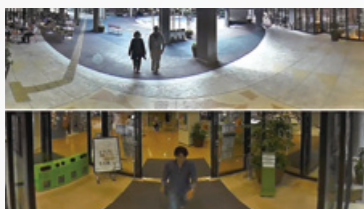


Installation on walls in locations where monitoring is required provides a 180° panoramic view of the area that is in front of the camera.

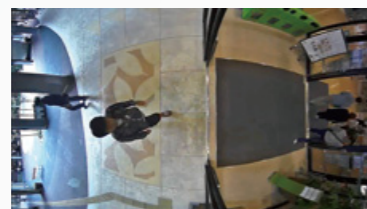


Installation of a 360° camera in the center of the store linked to fixed box cameras in all four corners of the room enables full monitoring with no blind spots.

### Office Buildings, Hospitals, Hotels etc.

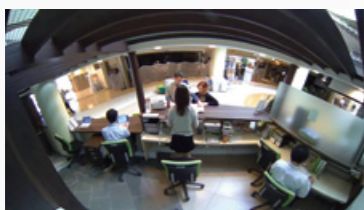


Double Panorama mode



Panorama mode

Installation above building doors to monitor people and items. 1 camera covers 180° outdoor and 180° indoor views. Entry and exit of people and items can also be monitored in 180° panorama on a screen.



Installation on the wall near the reception desk for full 180° monitoring.



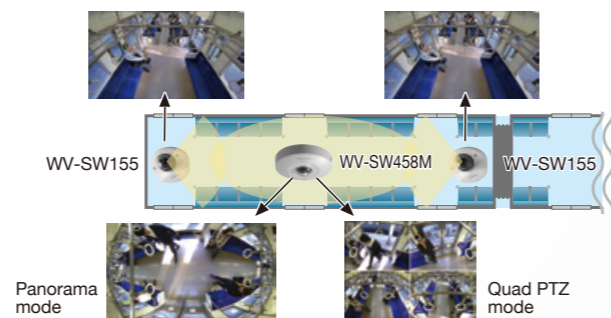
Monitoring concentrated on movement areas by linking with PTZ cameras in the area.

### Public locations such as stations and station plazas, on vehicles such as trains and buses



Monitoring of open outdoor spaces such as station grounds or outdoor station plazas. Can be linked with fixed box cameras and PTZ cameras to achieve monitoring with no blind spots.

Example train carriage installation



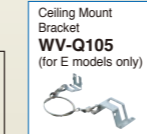
Can be fitted to the ceiling or walls of trains or buses to monitor inside the vehicle. Images can be recorded directly onto the SD card in the camera unit. Using a combination of the 360° camera with wide-angle compact dome cameras (WV-SW155) enables effective monitoring of the entire vehicle.

## Product Lineup

360-degree Super Dynamic Dome Network Camera  
**WV-SF438**  
(12 V DC or PoE)

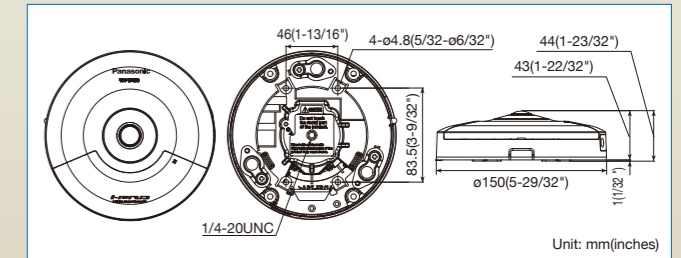


Optional Accessory



- 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 area VIQS** (Variable Image Quality on Specified area) function can decrease network bandwidth use.
- 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
- Fisheye lens control function enables intuitive control of easy-to-understand screen operations
- **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

### Appearance



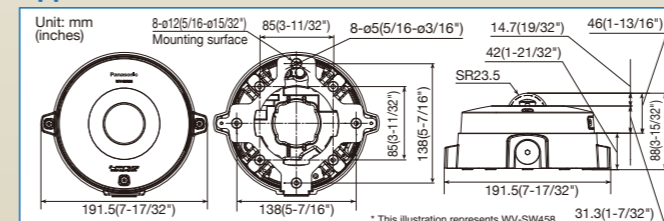
360-degree Super Dynamic Vandal Resistant Dome Network Camera  
**WV-SW458 / WV-SW458M**  
(12 V DC or PoE)



- 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.
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- High sensitivity with Day/Night (Electrical) function: 1.5 lx (Color), 1.2 lx (B/W) at F2.4
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standards.
- Vandal resistant mechanism for high reliability
- "Railway applications – Electronic equipment used on rolling stock". Compatible with EN50155
- M12 connector (WV-SW458M)

\* When the camera is faced toward spot light or other bright lights and light reflecting objects, ghost image may appear.

### Appearance



WV-SW458



\*Network connector section (RJ45 connector)



WV-SW458M



\*Network connector section (M12 connector)