i-PRO
SmartHD

360-degree
Super Dynamic
Dome Network Camera
Series

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**What’s i-PRO SmartHD?**

A smart investment with more than just video surveillance

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**What’s i-PRO SmartHD?**

**One Panasonic**
- Wider Selection, Higher performance

**SmartHD Package**
- SmartHD Package that Suits for Every User

**IP Migration**
- Seamless Operation between Analog / IP devices

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

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**360° Super Dynamic Network Camera**

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**What’s i-PRO SmartHD?**

**A smart investment with more than just video surveillance**

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**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.

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**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.

**Quad 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.

**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. Images in all four directions from the camera installation location are displayed on one screen. 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.

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

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

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**Installation Method**
- Can be installed on ceilings, walls

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**Additional functions**
- *Functions marked with “—” may be available depending on how the camera is used.*
Main Features

**Intelligent Resolution Technology**

With the Intelligent Resolution technology, 3 areas - outlines, detailed texture areas and scene detection 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 suitable 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 unchanged 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%.

**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.

**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.

**2-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.

**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.

**Vandal Resistant Mechanism**

Highly impact resistant, the camera is able to withstand powerful impact. Compliant with 50J (IEC60068-2-75)/IK10 (IEC62262), the camera is constructed with a reinforced external cover and with a shock-absorbing construction that protects the lens, even if the impact causes the lens cover to be pushed inwards.

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

IP66 compatible dustproof and waterproofing means that the camera can be installed in outdoor locations that are subject to wind and rain without the need for special housing. Compliant with IP66 (IEC60529), the camera can withstand temperatures between -40°C to +50°C (-40°F to +122°F), which makes it ideal for installation in cold/hot areas.

**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.

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

The camera is equipped with a dehumidifier that keeps the internal moisture level low, preventing condensation and quickly dissipating any condensation that forms.

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

The in-vehicle compatible design means the camera is ideally suited for installation in vehicles such as buses and trains. Railway Application: ENS0155, ENS0121

**Small and thin compact body**

The small and thin compact body enables inconspicuous installation of the camera in a wide variety of locations.

**Shock Absorber**

In the event of impact, the shock absorber provides even more efficient and effective monitoring.

**IP56 Compatible**

In addition, the camera is IP56 compatible, protecting it from dust and water splashes. This is ideal protection for outdoor use.

**Vandal Resistant Mechanism**

Highly impact resistant, the camera is able to withstand powerful impact. Compliant with 50J (IEC60068-2-75)/IK10 (IEC62262), the camera is constructed with a reinforced external cover and with a shock-absorbing construction that protects the lens, even if the impact causes the lens cover to be pushed inwards.

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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.

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

Monitoring of people’s movements beneath the camera. People can be detected on the screen using Panorama mode or Double Panorama mode.

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.

Products Lineup

**WV-SF438** (360° 1080p Full HD)

- 360° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264/H.265).
- 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

**WV-SW458**

- 360° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264/H.265).
- 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.
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- 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
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standards.
- Vandal resistant mechanism for high reliability
- Relay applications: Electronic equipment used on rolling production lines, etc. (M8 connector (WV-SW458M))
- M12 connector (WV-SW458)

**WV-SW458M**

- 360° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264/H.265).
- 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.
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- Vandal resistant mechanism for high reliability
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- M12 connector (WV-SW458)

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