Panasonic

NEW

i-PRO **H.265**
EXTREME

EXTREME PERFORMANCE UNDER EXTREME CONDITIONS

VIDEO SURVEILLANCE CATALOG
FALL 2017

WHY PANASONIC?

From the company that brought you the first security camera in 1957 and invented over a dozen industry standards, Panasonic provides industry-leading solutions to capture, record, manage and analyze surveillance video. Panasonic provides a comprehensive lineup of video surveillance products and solutions that offer the industry's highest picture quality, mission-critical reliability and the industry's lowest total cost of ownership. When it counts, you can count on Panasonic video surveillance products and systems to deliver.

SURVEILLANCE AND MONITORING SYSTEMS LINEUP

Visit www.panasonic.com/security for the most up-to-date news on Panasonic video surveillance products.

i-PRO EXTREME — 5 YEAR WARRANTY

Panasonic's new i-PRO Preferred Program provides added value to your i-PRO video surveillance camera purchase without adding cost. i-PRO Preferred strengthens your warranty, expedites service response, and includes a bundled Video Insight camera license. New and current owners of select i-PRO camera models* are eligible for a free upgrade to this preferred service status. No Registration required!

And all NEW i-PRO Extreme S and X Series cameras and NX Series recorders enjoy the full 5 year warranty automatically.

Enjoy these benefits:

5 YEAR WARRANTY
Add a two-year extended warranty to your existing three-year factory warranty on select* i-PRO cameras and all new i-PRO Extreme Cameras (S and X Series) and recorders (NX Series) now ship with a 5 Year Preferred Warranty as standard.

VIDEO INSIGHT UNLIMITED LICENSE
While competitive manufacturers charge an annual camera license fee for each camera connected to their VMS, you'll enjoy a bundled Video Insight camera license with each eligible i-PRO camera.

PRIORITY ADVANCE EXCHANGE
Receive replacement units shipped the same day with overnight delivery.

For details visit: www.us.panasonic.com/ipropreferred

* For U.S. purchasers only. Condition and limitations apply. Only select Panasonic i-PRO cameras with a manufacturing date after October 2014 for both the VI VMS license and the additional two-year warranty extension are eligible. All i-PRO Extreme Cameras (X and S Series and recorders (NX Series) ship with a standard 5 year i-PRO Preferred Warranty.

A Panasonic Company

Panasonic

NEW

New Client (VI MonitorPlus)
The new clients that allows greater flexibility with UI customization, graphics, as well as clear separation between UI and application logic.

Support for H.265
H.265 is supported for Live Video Streaming, Playback, Clipping and Snapshot creations. End users can now benefit from improved efficiency in bandwidth and storage without sacrificing image quality.

Expanded Functionality Via New Plugin Structure
Introduces new plug-in structure that allows users to expand the functionality of the video surveillance system to specific vertical market. Including Point-of-Sales for retail, GeoLocation for Transportation, Analytics and LPR.

Integrated Access Control (MonitorCast 4)
MonitorCast 4 is an enterprise access control application that comes integrated with VI MonitorPlus to provide a seamless unified security solution. Benefits include: Easy to use, browser based management with extremely scalable client connections, dashboard for realtime reporting, rules manager, Active directory import and more.
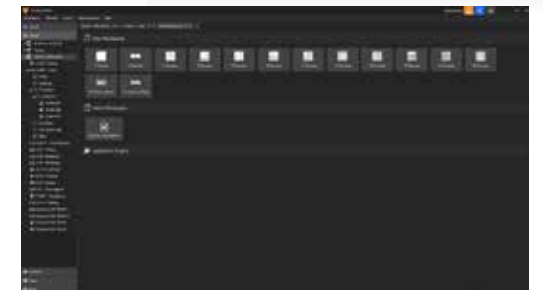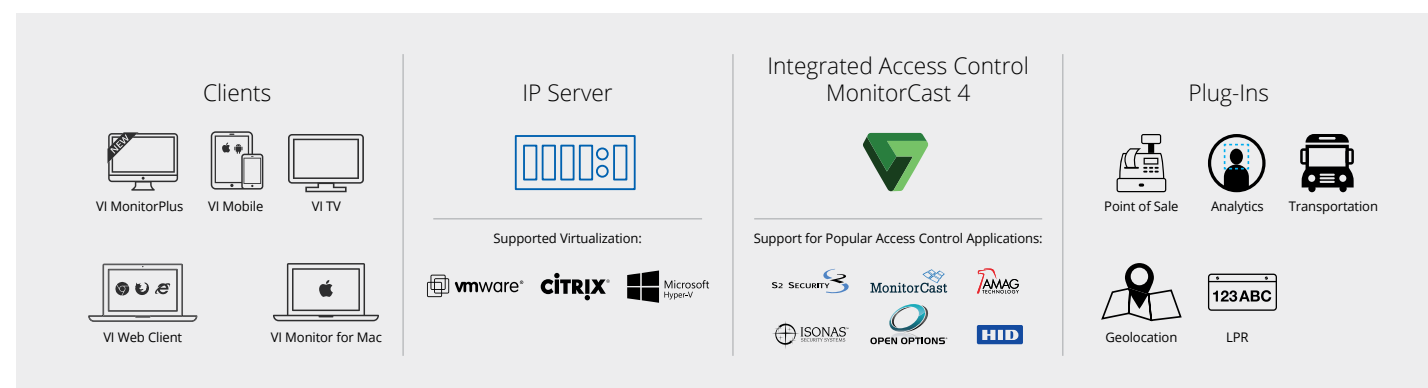

Simplified Workspace for Easier Configuration

Deeper Access Control Integration

Introducing the New Video Insight 7

The New VI 7 is faster and more powerful than ever. Redesigned from the ground up to provide enhanced performance, maximize scalability and offer new premium functionality for key vertical markets. VI 7 is aimed at making the entire Video Insight video management suite more intuitive, more powerful and easier to use.

VI 7 Product Suite Includes:

Clients	IP Server	Integrated Access Control MonitorCast 4	Plug-Ins
VI MonitorPlus VI Mobile VI TV			Point of Sale Analytics Transportation
	Supported Virtualization:	Support for Popular Access Control Applications:	
VI Web Client VI Monitor for Mac	vmware CITRIX Microsoft Hyper-V	S2 SECURITY MonitorCast AMAG ISONAS OPEN OPTIONS HID	Geolocation 123 ABC LPR

Why Choose Video Insight's Security Management Software?

The enterprise VMS features you love
The Video Insight VMS has a wide range of robust features you'd expect to find in an enterprise-level software. Health Monitor, automated Failover, unlimited clients and users, and Active Directory/LDAP integration are included.

Scale your system without limitations
Our pure 64-bit VMS supports an industry leading number of cameras per server, unlimited scalability, client workstations, users with simple integration to legacy systems, centralized administration of the system and more.

Lower Total Cost of Ownership (TCO)
Affordability, flexibility and a simple licensing model are what sets Video Insight apart from the rest – we provide the most cost-effective enterprise class VMS solution on the market.

Wide range of supported cameras
Video Insight 7 is an open platform that supports over 4,000 camera models from more than 150 manufacturers.

VMS License Included with i-PRO / ADVIDIA Cameras
Each i-PRO / ADVIDIA camera comes bundled with a free camera license (IPSVC-UL) for Video Insight VMS.

Competitive Upgrade Program (CUP)
Our Competitive Upgrade Program (CUP) can help reduce TCO, and allow you to upgrade your system at a fraction of what you're paying today.

Make the most of existing legacy systems
Video Insight easily integrates with your existing systems, including access control and building management. Our robust SDK and API make it easy to maintain a single interface and manage all systems from a centralized console.

World-class U.S. based support
At Video Insight, we pride ourselves on being able to assist you in your time of need in a timely manner. We guarantee a callback within one hour or less.

For more information please visit **www.video-insight.com**

INTRODUCING i-PRO EXTREME

i-PRO EXTREME

Panasonic

Panasonic Introduces a completely new line up of Extreme Performance i-PRO Cameras, Recorders and Management Software Delivering **EXTREME PERFORMANCE UNDER EXTREME CONDITIONS**

New i-PRO platform cameras deliver Extreme Visibility with outstanding low-light performance from their 1/3" sensors that rival many 1/2" sensor cameras and feature an industry leading 144dB of Extreme Dynamic Range delivering balanced exposure and accurate color in even the most challenging lighting environments. Auto-Intelligence features like automatic scene-detection continuously monitor the field of view and instantly adjust the cameras parameters to optimize for best image capture based on scene dynamics, compensating for motion and constantly changing lighting. i-PRO's Extreme Compression begins with industry standard H.265 encoding generating up to a 50% reduction in bandwidth compared to H.264 and Panasonic's Advanced Smart Coding and Intelligent Face Coding features push that figure up to an 80% reduction. Extreme Reliability is enabled by technologies like HDD Dynamic Power Control for the new WJ-NX400 class recorder that reduces the frequency of HDD failures and greatly extends their working life and Automatic-Failover which allows two recorders to run in tandem for seamless redundancy in mission critical applications. Panasonic's i-PRO Preferred Program stands behind i-PRO's Extreme Reliability by adding 2 years of factory warranty to the standard 3 year warranty on cameras. i-PRO's Extreme Data Security means the new i-PRO Extreme surveillance platform employs PC-level IP-Data Security standards via Panasonic's Secure Communications Suite and robust authentication using Symantec Device Certificates delivering comprehensive end-to-end data protection on all new i-PRO Extreme-based cameras, recorders and video management software.

i-PRO EXTREME

EXTREME VISIBILITY
ENABLES CAPTURE OF THE HIGHEST QUALITY IMAGES AUTOMATICALLY EVEN IN VERY DYNAMIC AND CHALLENGING LIGHTING ENVIRONMENTS

iA **SD EXTREME Super Dynamic 144dB** **Color Night Vision**

INTELLIGENT AUTO Continuously monitors scene dynamics and automatically adjusts key camera settings in real-time to optimize captured images
EXTREME SUPER DYNAMIC RANGE Extends Dynamic range to an industry leading 144dB enabling balanced scene exposure even in the most difficult lighting conditions
COLOR NIGHT VISION Delivers outstanding low-light performance with accurate color rendition from a 1/3" sensor, rivaling performance from more costly 1/2" sensor cameras

EXTREME COMPRESSION
INDUSTRY STANDARD H.265 AND PANASONIC'S SMART CODING TECHNOLOGIES DELIVER THE HIGHEST QUALITY IMAGES AT THE LOWEST BITRATES

H.265 **Smart Coding** **INTELLIGENT FACIAL CODING**

H.265 COMPRESSION Industry standard H.265 compression delivers high quality images while reducing streaming and storage requirements by approximately 50% over H.264
SMART CODING Working on top of H.265, Smart Coding technologies like GOP Control and Auto-VIQs reduce bandwidth requirements even further for up to an 75% efficiency over H.264
SMART FACIAL CODING Automatically detects faces and self-learns motion-areas of a scene to ensure the highest quality recording of detected faces and regions of interest

EXTREME RELIABILITY
NEW TECHNOLOGIES DELIVER LOW FAILURE RATES AND THE 5 YEAR i-PRO PREFERRED WARRANTY STANDS BEHIND PANASONIC'S HIGH RELIABILITY

HDD DYNAMIC POWER CONTROL **NX400 Auto-Failover** **5 YEAR WARRANTY**
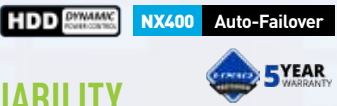
HDD POWER CONTROL HDD Dynamic Power Control technology intelligently powers down HDD's without risking recording loss, extending HDD life up to 7 years*
AUTO-FAILOVER New WJ-NX400 recorders can be connected in tandem to enable seamless recording redundancy for mission critical applications
5 YEAR WARRANTY Panasonic's i-PRO Extreme Cameras (S and X Series) and recorders (NX Series) now ship with a 5 Year i-PRO Preferred Warranty with Advanced Exchange** as standard.

EXTREME DATA SECURITY
PANASONIC'S SECURE COMMUNICATION SUITE AND SYMANTEC'S DEVICE CERTIFICATION ENSURES ROBUST END-TO-END IP SECURITY

SECURE Communication **Symantec. Device Certificate**

SECURE COMMUNICATION A PC-level security suite embedded in all new i-PRO Extreme Cameras, Recorders and Management Software enabling data and communications encryption
SYMANTEC CERTIFICATION Panasonic's has partnered with Symantec, the global leader in cybersecurity, to deploy their reliable Device Certificate technology on all i-PRO Extreme devices
FIPS CERTIFIED i-PRO Extreme products meet the Federal Information Processing Standard (FIPS) 140-2 Level 1, as required for FBI and Public Safety use

*Results may vary depending on environment and usage.
**Visit Panasonic.com for eligibility requirements and limitations.

NEW CAMERAS [H.265] [FULL HD 1080 60p] [HD 720 60p]
SECURE H.265 CAMERA LINE-UP

NEW H.265 i-PRO HD & Full HD 60fps camera line-up featuring Extreme Visibility, Extreme Compression, Extreme Reliability and Extreme Data Security performance

EXTREME VISIBILITY
- Ultra High Sensitivity 0.008 lx (HD), 0.012 lx (FHD)
- Color Night Vision – Full Color in low light
- Extreme Super Dynamic Range 144dB
- Auto Scene-detection and Optimization

EXTREME COMPRESSION
- H.265 Compression – Fully H.264 Compatible
- Smart Coding – Long GOP Mode, Auto VIQS
- Smart Facial Coding

EXTREME RELIABILITY
- Easy-Install ClearSight™ Dome
- Integrated Image Stabilization on PTZ's
- Reliable night time image capture via built-in IR*

EXTREME DATA SECURITY
- Secure Communication Suite
- Symantec Device Certificates

WJ-NX400 [H.265]
SECURE H.265 SYSTEM RECORDER

NEW H.265/H.264 high-throughput and scalable recorder featuring integrated GUI and robust embedded IP security enabling a secure end-to-end PC-Less surveillance solution

SECURE HIGH BANDWIDTH RECORDING
- 64 Channels – 128 Max (H.265/264)
- 384Mbps recording bandwidth
- Secure Communication and Symantec Device Certificates

PC-LESS SURVEILLANCE SOLUTION
- Built-in GUI and Dual HDMI Outputs
- Automatic camera configuration
- 2nd Stream Recording for mobile playback

SCALABLE STORAGE
- (9) Integrated Drive-bays RAID/5/6
- External storage expansion up to 324TB

HIGH RELIABILTY AND REDUNDANCY
- Dynamic HDD Power Management increases HDD life
- Redundant fail-over using 2nd Recorder

WV-ASM300 [H.265]
SECURE H.265 VIDEO MANAGEMENT

NEW Powerful Windows® application enables a secure, scalable H.265 ready, multi-camera, multi-recorder surveillance management environment

FULLY INTEGRATED & SECURE
- Camera control, viewing and recorder management
- Integrates i-PRO Extreme H.265 & i-PRO H.264 equipment
- Secure Communication and Symantec Device Certificates

POWERFUL USER INTERFACE
- NEW UI design & 4K native GUI enhances usability
- Automatic camera configuration wizard
- Now include multi-monitor and WJ-CU950 support

SCALABLE AND EXTENDABLE
- Base: 100 recorders, 64 encoders and 256 cameras
- Expandable to thousands of cameras, recorders and encoders

EASY TRIAL OPTIONS
- NEW FREE limited version supports 16 Cameras/1 Recorder
- No annual license fees

CAMERA		MODEL NO.	AVAILABILITY	LENS	TELE LENS	MOTORIZED ZOOM	ABF / AF	IR-LED	T-D/N	SD CARD	AUDIO	I/O	VANDAL RESISTANT	CLEAR SIGHT
Indoor PTZ	Full HD	WV-S6130	Oct. 2017	Yes	21X	Yes	Yes	—	Yes	Yes	In/Out	Yes	—	—
		WV-S6131	Shipping	Yes	40X	Yes	Yes	—	Yes	Yes	In/Out	Yes	—	—
	HD	WV-S6111	Shipping	Yes	40X	Yes	Yes	—	Yes	Yes	In/Out	Yes	—	—
Outdoor PTZ	Full HD	WV-S6530N	Oct. 2017	Yes	21X	Yes	Yes	—	Yes	Yes	In/Out	Yes	—	Yes
		WV-X6131N	Shipping	Yes	40X	Yes	Yes	—	Yes	Yes	In/Out	Yes	—	Yes
	HD	WV-X6111N	Shipping	Yes	40X	Yes	Yes	—	Yes	Yes	In/Out	Yes	—	Yes
Indoor Box	Full HD	WV-S1131	Shipping	(CS Mount)	—	—	Yes	—	Yes	Yes	In/Out	Yes	—	—
	HD	WV-S1111	Shipping	(CS Mount)	—	—	Yes	—	Yes	Yes	In/Out	Yes	—	—
Outdoor Box	Full HD	WV-S1531LTN	Shipping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
		WV-S1531LN	Shipping	Yes	—	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
	HD	WV-S1511LN	Shipping	Yes	—	—	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
Indoor Dome	Full HD	WV-S2131L	Shipping	Yes	—	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	—	—
	HD	WV-S2111L	Shipping	Yes	—	—	Yes	Yes	Yes	Yes	In/Out	Yes	—	—
		WV-S2110	Shipping	Yes	—	—	Yes	—	(E-D/N)	No	Mic	—	—	—
	5MP	WV-S4150	Dec. 2017	Yes	360	—	Yes	—	(E-D/N)	Yes	In/Out	Yes	—	—
Indoor Vandal Dome	Full HD	WV-S2231L	Shipping	Yes	—	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	—
	HD	WV-S2211L	Shipping	Yes	—	—	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	—
Outdoor Vandal Dome	Full HD	WV-S2531LTN	Shipping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
		WV-S2531LN	Shipping	Yes	—	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
	HD	WV-S2511LN	Shipping	Yes	—	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
	5MP	WV-S4550L	Dec. 2017	Yes	360	—	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes

RECORDER	MODEL NO.	AVAILABILITY	DESCRIPTION
64-Channel H.265 NVR	WJ-NX400	Shipping	i-Pro Extreme H.265 Network Video Recorder
32-Channel H.265 NVR	WJ-NX300	Dec. 2017	i-Pro Extreme H.265 Network Video Recorder
16-Channel H.265 NVR	WJ-NX200	Sept. 2017	i-Pro Extreme H.265 Network Video Recorder
Expansion Unit	WJ-HXE400	Shipping	HDD Expansion Unit for WJ-NX400, WJ-NX300
Extension Software	WJ-NXE40W	Shipping	32 Channel Extension Software for WJ-NX400
Secure Communications	WJ-NXS01W	Shipping	Secure Communications 1 channel license (4/16/32 Channels Version available)

SOFTWARE	MODEL NO.	AVAILABILITY	DESCRIPTION
Video Management Application	WV-ASM300	Shipping	i-Pro Extreme H.265 Video Management Software Supports 16 Cameras and 1 NVR free without activation
	WV-ASM300UG	Shipping	Upgrade License from ASM200 to ASM300

*Most models

NEW

i-PRO EXTREME X-SERIES PTZ

Panasonic

NEW

Panasonic introduces new i-PRO Extreme X-series PTZ cameras featuring Intelligent Zoom Stabilization and optional Vehicle Incident Detection analytics.

Panasonic's latest i-PRO Extreme PTZ outdoor cameras take road and traffic monitoring to a new level of efficiency by combining a high performance imaging platform with advanced video analytics technology delivering enhanced situational awareness at longer distances and enabling security professionals to detect and respond road and traffic incidents more quickly.

i-PRO EXTREME

ONVIF | S G

HIGH-PERFORMANCE i-PRO EXTREME TECHNOLOGY

Featuring a completely new imaging system based on Panasonic's recently introduced high-performance i-PRO Extreme platform and integrating an improved optics package, the new H.265/H.264 compatible outdoor PTZ cameras feature high-quality Full HD (WV-X6531N) and HD (WV-X6511N) video resolution with outstanding low light sensitivity of 0.015lx and include the full i-PRO Extreme technology package including H.265 Compression with Smart Coding, Intelligent Auto, Color Night Vision and the Secure Communication suite.

WV-X6531

ULTRA-LONG 40 ZOOM LENS WITH INTELLIGENT ZOOM STABILIZATION (IZS)

Offering full 360° continuous panning and an ultra-long 40x high-power zoom lens, the camera covers 1.3X the distance of standard models, allowing cameras to be installed effectively at up to one mile intervals. With its integrated gyro-senor, the new PTZ provides Intelligent Zoom Stabilization (IZS) producing remarkably stable images even at very long zoom distances. Further, the advanced gyro-driven stabilizer technology is able to detect and null out mechanical vibrations, a common issue that compromises image usability for conventional PTZ cameras when installed on highways and bridges.

DURABLE AND RELIABLE

The new i-Pro Extreme PTZ's include Panasonic's exclusive ClearSight® Dome coating which prevents rain drops and dust from collecting on the dome surface keeping surveillance viewing clean and clear and effectively reducing maintenance costs that are inherit with conventional domes. A highly durable mechanical design ensures a superior quality surveillance solution for outdoor applications and the new X-Series PTZ is covered by a limited 5 Year i-PRO Preferred Warranty.*

VEHICLE ANALYTICS OPTION

Optional Vehicle Incident Detection software (WV-XAE100W) provides easy and intuitive intelligence and traffic monitoring capabilities, enabling the cameras to detect unusual vehicular activity up to four lanes at a time such as a stopped vehicle on a highway, or a vehicle traveling in the wrong direction. And once an incident has been detected, alarms can be automatically sent to Traffic Management Systems to enable a quick and appropriate response.

Key features of cameras include:
- Full HD 1080p (WV-X6531N) and HD 720p (WV-X6511N) resolution at 60fps with a 40X optical zoom lens
- Enhanced Super Dynamic Range performance up to 144db
- Integrated i-PRO Extreme Platform Technologies including: H.265, Intelligent Auto, Color Night Vision, and Secure Communications
- Industry standard H.265 and full H.264 compatibility
- Embedded Smart Coding compression technology reduces bandwidth requirements up to 95%
- Highly Durable gear-drive Pan/Tilt mechanism delivers a 3x longer lifespan than competitors belt driven schemes
- ClearSight® Dome Coating ensures clear viewing and reduces dome cleaning costs
- 360° continuous panning, advanced auto tracking, and SD memory card slot
- Fully water and dust proof conforming to IP66 and IK10 environmental specifications
- 5 Year i-PRO Extreme Preferred Warranty with Advanced Exchange

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i-PRO EXTREME INDOOR SERIES PTZ

WV-S6131, WV-S6111

EXTREME IMAGE QUALITY FOR EVIDENCE CAPTURING UNDER CHALLENGING CONDITIONS
- Long-distance vision with high power 40x zoom lens
- Sharp and clear image of fast moving vehicles with Intelligent Auto
- Outstanding low light performance in true color with low noise for night time applications
- Super Dynamic 144dB for backlit situation by headlights and shadows on the streets at night
- Long life Pan/Tilt gear mechanism

EXTREME H.265 COMPRESSION WITH NEW SMART CODING
- Longer recording, less storage compared to H.264 based compression techniques
- New self-learning ROI* encoding (Auto VIQS) dynamically detect motion areas to keep vehicles and human in good picture quality while lowering your bandwidth

*Region of Interest

EXTREME DATA SECURITY
- Full encryption SD card edge recording to keep your data safe
- FIPS 140-2 Level 1 compliant
- Full end-to-end system encryption with supported VMS and devices to protect from IP snooping/spoofing and detect data alteration

KEY FEATURES:
- Full-HD 1920x1080 60fps
- 40x optical zoom
- Durable Pan/Tilt gear mechanism
- iA (intelligent Auto)
- Extreme Super Dynamic 144dB
- Color night vision (0.001 to 0.015 lx)

APPLICATIONS:
Retail (Shopping mall) | Airport | Subway | Casino | Logistics

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i-PRO EXTREME 5MP 360 FULL HD

WV-S4550L, WV-S4550LM, WV-S4150

EXTREME IMAGE QUALITY FOR EVIDENCE CAPTURING UNDER CHALLENGING CONDITIONS
- Clear and distortion-free image of the person's face and objects at the edge of the fisheye
- Instantly response to sudden light changes like tunnel entry and exit
- Auto Shutter speed control for fast moving objects
- Super Dynamic 108dB for backlit situation and shadows on the streets at night

EXTREME H.265 COMPRESSION WITH NEW SMART CODING
- Longer recording, less storage compared to H.264 based compression techniques
- New self-learning ROI* encoding (Auto VIQS) dynamically detect motion areas to keep vehicles and human in good picture quality while lowering your bandwidth

*Region of Interest

EXTREME DATA SECURITY
- Full encryption SD card edge recording to keep your data safe
- FIPS 140-2 Level 1 compliant
- Full end-to-end system encryption with supported VMS and devices to protect from IP snooping/spoofing and detect data alteration

KEY FEATURES:
- 5 Megapixel images up to 30 fps
- iA (intelligent Auto)
- Super Dynamic 108dB
- H.265 Smart Coding
- FIPS 140-2 Level 1 compliant
- IP66, IK10 certified

APPLICATIONS:
Retail / Banks | Education / Hospitals | Building Transportation (Airport / Train, Subway station)

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i-PRO EXTREME NETWORK VIDEO RECORDER

WJ-NX200, WJ-NX300

SECURE COMMUNICATION AND HIGH COMPRESSION RECORDING
- Significant reduction of storage space usage through H.265 and Smart Coding.
- 9 ch. expandable to 16 ch. camera input. Supports H.265 / H.264 mixed recordings (Model WJ-NX200).
- 16 ch. expandable to 32 ch. camera input. Supports H.265 / H.264 mixed recordings (Model WJ-NX300).
- Symantec device certificates pre-installed

*Secure Communication Kits are necessary.

PC-LESS NON-VMS SURVEILLANCE SOLUTION
- No camera license fees with a default number of cameras; no annual license updates required.
- Built-in GUI and Dual HDMI (4K/FHD) outputs
- Automatic camera configuration
- Image search with thumbnails
- High-speed copy to USB storage

HIGH RELIABILITY AND HIGH EFFICIENCY DATA READING/WRITING
- Eco-writing: Acceleration of data access (reading/ writing) by original file system
- Instantaneous power failure measures: Normal operation at instantaneous power failure within 200 ms; safe shutdown at power failure of 200 ms or more.

KEY FEATURES:
- Significant reduction of storage space usage through H.265 and Smart Coding
- No camera license fees with a default number of cameras; no annual license updates required
- Built-in GUI and Dual HDMI (4K/FHD) outputs

APPLICATIONS:
Banks | Retail / Quick-Service Restaurants | Hospitals / Education | Factories | Gas Stations

EXTREME Visibility

Enables automatic capture of evidence at the highest quality under dynamic and challenging surveillance environments.

Intelligent Auto Mode (iA)

iA

Advanced image stabilization is used to prevent capturing blurry images, and intelligent sensitivity automatically is used to adjust the camera's gain and shutter speed according to brightness levels and movement of the object.

Applications: City safety, traffic, transportation

Auto Scene Detection

➕

Parameter Settings

Conventional	iA Mode

Velocity Detection

iA provides sharp images of moving vehicles with blur control

Day & Night Detection

Automatic reflection control provides more detail during difficult nighttime scenarios

Color Night Vision

Color Night Vision technology transforms a standard 1/3 inch sensor camera into an effective, low-light capable camera, enabling it to produce an extremely high-quality image even in the most challenging lighting conditions.

Applications: City safety, ports, perimeter security

Ordinary Camera 0.6 lx   EXTREME Camera 0.6 lx

144dB EXTREME Super Dynamic

SD EXTREME Super Dynamic 144dB

Combined with the new 144dB enhanced SD capabilities, this high-performance face detection technology can clearly and automatically identify an individual's face. It offers optimal facial recognition and can capture evidence even in dynamic scenes or heavily backlit conditions.

Applications: Entrances of shopping malls and buildings

Super Dynamic: OFF   Super Dynamic: 144dB

Intelligent Zoom Stabilization

Intelligent Zoom Stabilization

High-power, 40x optical zoom lens allows for higher resolution images of objects at a distance.
The advanced image stabilization function can stabilize high-power zoom images by absorbing vibrations.

Intelligent Zoom Stabilization: OFF   Intelligent Zoom Stabilization: ON

EXTREME Compression

Compression of high-resolution image data is used to reduce network bandwidth, data storage, and server load costs, while maintaining high quality.

H.265 Compression + Smart Coding Technology

Combining H.265 Compression with Panasonic Smart Coding Technology reduces bandwidth by maximum 95%* of conventional H.264 Compression. This security system maintains the quality of moving images while reducing bandwidth and storage costs.

* Value in Advanced mode. It depends on the scene.

H.265 (HEVC)

➕

Smart Coding

GOP Control ➕ Auto VIQS ➕ Face Compression

Panasonic H.264   Panasonic H.265   Panasonic H.265 Smart Coding

50%   95%

"Smart Coding" provides over 95% reduction in total file size when compared to "H.264"

GOP Control

The GOP (group of pictures) control can reduce the total transmitted data of images with little motion by controlling the transmission interval of I-Frame, which is heavy in data. If the motion is significantly low, the transmission interval can be set to 60 seconds to drastically reduce the total data transmitted.

Every 4 seconds

Every 16 seconds

Every 60 seconds

Auto VIQS

Auto VIQS detects movement within the image and compresses areas with little motion to reduce transmitted data while maintaining the quality of the image.

Dynamic VIQS OFF   Dynamic VIQS ON

Network consumption Average : 3 Mbps   Network consumption Average : 1.5 Mbps

High bitrate (Original compression)   Low bitrate (Higher compression)

Face Compression

The camera automatically distinguishes the sections of the images that are important such as moving objects and people's faces.
The quality of unimportant areas is reduced without compromising the quality of important sections, therefore optimizing the data size of the footage.
On top of integrating Smart Coding into the conventional GOP Controls, the improved compression efficiency through Auto VIQS and Long-Term Compression combined with Smart Facial Coding, which detects faces and maintains the quality of only faces, can compress the file drastically to reduce the data size.

High bitrate   Mid bitrate   Low bitrate

*Supported functions and specifications differ according to the models. See the specifications for each model. Photos are images used to describe the functions.

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Panasonic

EXTREME Data Security

In addition to Data encryption and communication encryption, provide secure network access between trusted devices through device certification then prepare for the threat of advanced cyber attacks.

End-to-End Data Protection Solution

End-to-End Secured System

End-to-End Data Encryption
- Support encryption communication
- Camera-encrypted recording at the edge

Pre-installed Symantec Device Certification
- Communication encryption
- Video tampering detection

FIPS 140-2 Level 1

FIPS140-2 Level 1 CAVP* compliant
(Federal Information Processing Standardization)
- For federal/public safety usage
*Evaluated by WV-TW370P

Communication encryption (SSL/TLS)

EXTREME Reliability

Achieves high endurance and long life in storing information even under harsh environments.

HDD Dynamic Power Control `Feature Update`

Long life and high reliability is achieved through technology that individually controls access to the HDD.
If a recorder needs to recover crashed data, it can do so in a short amount of time.

Individually-managed HDD
WJ-NX400 manages the status of each HDD, using the following three states:
1 **Active state**: Currently being accessed by the WJ-NX400.
2 **Idle state**: Ready to be accessed
3 **Stand-by state**: Halted motor

- **Active** : Motor – On; Head – Read/Write
- **Idle**   : Motor – On; Head – Home Position (ready for next access to a HDD)
- **Stand-by** : Motor – Off; Head – Home Position

Note: In the case of a RAID configuration, each HDD is operated independently.

Auto Failover Recording `Feature Update`

In the case of a NVR failure, the stand-by NVR will begin recording automatically.

EXTREME Analytics

Vehicle Incident Detection

The Vehicle Incident Detection function detects incidents such as wrong-way driving and stopped vehicles, and then alerts the Traffic Management System.
While it is difficult for a single human operator to physically detect vehicle accidents on multiple camera monitors, such monitoring is made possible with the Vehicle Incident Detection system.

| Roadside	Monitoring & Control Center	Road Facilities & On-site Services
	Video Management System	BEWARE! WRONG-WAY DRIVING VEHICLE AHEAD
	Traffic Management System	
Wrong-way Driving & Stopped Vehicles	Notification & Mapping Situational Awareness	Quick & Appropriate Response

MONITORING WITHOUT BLIND SPOTS

PTZ (Pan-Tilt-Zoom) cameras and omnidirectional cameras enable wide-area monitoring.

Multiple cameras can be combined for more efficient monitoring and to eliminate blind spots.

PTZ CAMERA FOR WIDE RANGE MONITORING AND A HIGH ZOOM RATIO

Normal fixed lens cameras can only monitor in a certain direction, but the lens of a PTZ camera can be operated remotely to switch to the direction you want to view.

Detailed areas can also be zoomed in to a maximum of 90x. Since the cameras can be infinitely rotated 360 degrees at a high speed of 300 degrees/sec, you will not miss the subjects you want to monitor.

WV-SW598

-15°
0°
195°
180°

Pan
360-degree
endless

Tilt -15 degrees to 195 degrees
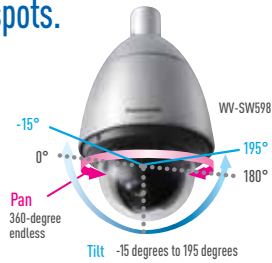
Preset Position / Preset Sequences
If the locations you want to monitor are fixed, you can register them in advance and move to them with a single touch or automatically patrol the registered locations. Data can be saved to a recorder when automatically patrolling the registered locations, without intervention by an operator. Ranges that cannot be covered with a single fixed lens camera can be covered by patrolling.
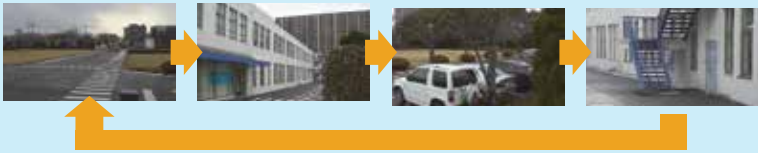
Advanced Auto Tracking
The pan, tilt, and zoom functions can be combined for automatically tracking the movement of a subject.
If the tracked subject moves out of the camera´s shootable range, notification is sent to other cameras so that the tracking process can be carried on without interruption.

Advanced
Auto Tracking

AUTO EYELID MECHANISM (AEM)

When the direction of the camera lens is tilted upward from the horizontal plane, the video image can appear doubled due to the distorting effect of the dome cover and other causes.
The Panasonic WV-SW598A uses an AEM function to reduce this double-image effect and enables shooting of images up to 15° upward from the horizontal plane. This allows the use of auto tracking and other functions over a wider movement range of the subject.

Auto Eyelid mechanism / OFF   Auto Eyelid mechanism / ON
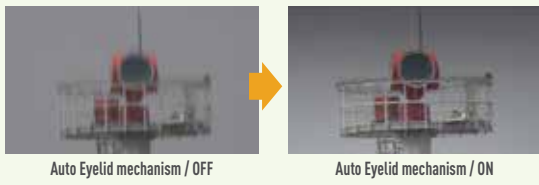
360-DEGREE MONITORING

The 360-degree Network Camera can capture images around the camera lens in all directions.
Available modes include Fisheye, Double Panorama, Panorama, Quad PTZ, and 4 Stream, and the camera can output video images based on the selected video mode for reduced loads on the viewing system.

Fisheye Mode   Double Panorama Mode   Panorama Mode

Quad / Single PTZ Mode   4 Stream Mode

DE-WARPING

Fisheye Mode   Quad / Single PTZ Mode

The 360-degree Network Camera can generate and output video images for each mode within the camera unit. Also, the Network Disk Recorder (WJ-NV300) or i-PRO Management Software (WV-ASM200) can be used on 360°omnidirectional images captured by Fisheye Mode to convert to a format that is easier to view, such as Quad PTZ. Because the 360°omnidirectional video image is stored in the recorder, nothing is missed within the viewing area.

In addition, the area that you want to view can be selected using a controller or mouse to allow you to automatically move the viewing spot for patrolling the area. Even during patrolling, areas not visible on the screen are all stored in the recorder in Fisheye Mode so that nothing is left unseen. The Pan-Tilt of the 360-degree Network Camera does not use mechanical components, and so provides a smooth movement without the mechanized wear that could adversely affect camera longevity.
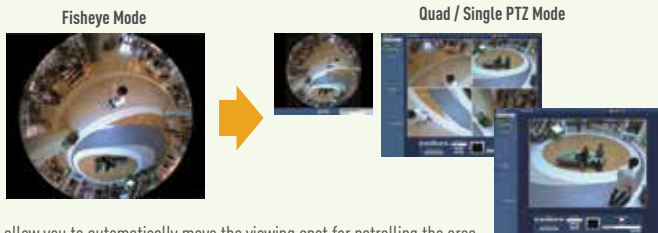
SUPPORT FOR VARIOUS INSTALLATION ENVIRONMENTS

Panasonic network cameras are available in a full lineup of products custom-tailored for a wide range of installation environments. Their specialized design also helps to reduce the work required for installation.

## SELECT THE SPECIALIZED MODEL FOR YOUR INSTALLATION ENVIRONMENT

Rainwater protection for outdoor installations
The outdoor models have a waterproof and dustproof structure that is rated IP66 for outdoor installation without requiring insertion in a special housing or other weatherproofing protection.

IP66
standard

Temperature protection for outdoor installations
Models can be selected to match your specific installation conditions and can be installed in environments with temperatures ranging from +55°C to -50°C.
*The supported temperature range varies depending on the specific model.

DEHUMIDIFICATION DEVICE

DEHUMIDIFIER

NO
HUMIDIFICATION
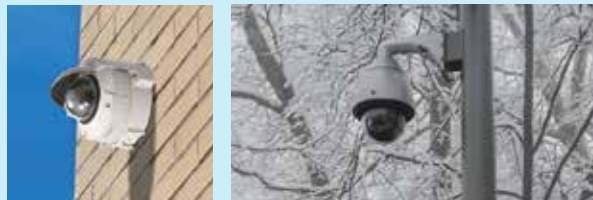
The network camera outdoor models have a built-in dehumidifier device to lower the internal humidity for preventing cloudiness due to condensation. This eliminates blurry video images caused by clouding of the camera dome cover when installed in locations with high humidity or extreme temperature changes over the course of the day.

Vandal Resistant
When installed in locations that are prone to vandalism and tampering, measures are required for preventing damage to the camera.
Models featuring the Vandal Resistant mechanism are ideal for installation in these types of locations.

Vandal
Resistant

VANDAL RESISTANT MECHANISM

Models featuring the Vandal Resistant mechanism include a shock absorber around the internal lens.
Even if the dome cover is subjected to a potentially damaging impact, the shock absorber will absorb this impact to protect the internal structure from damage.

*Supported functions and specifications differ according to the models. See the specifications for each model.

*Supported functions and specifications differ according to the models. See the specifications for each model.

SUPPORT FOR VARIOUS INSTALLATION ENVIRONMENTS (continued)

Panasonic network cameras are available in a full lineup of products custom-tailored for a wide range of installation environments. Their specialized design also helps to reduce the work required for installation.

Onboard Model

A lineup of network cameras is also available with anti-vibration and other specific features for installation in cars, buses, and other vehicles.
The WV-SBV131M, WV-SBV111M, WV-SW155MA, WV-SW158, WV-SW458MA, and WV-SFV481 are compliant with the EN50155 European railway standards.

Mount on the Outside of the Vehicle

The rugged mobile network camera WV-SBV131M, WV-SBV111M meets the United States Department of Defense Military Standards MIL-STD-810G to withstand even the harshest of environments.
Also meeting the highest International Protection Standards IP6K9K, the camera is dust tight and waterproof.
Meeting such standards allows the camera to be mounted on the outside of busses and trains, which are constantly shaking and rained on.
The lenses' hard coated surface allows the vehicle to be put through a carwash.
Capable of withstanding temperatures ranging from -40 °C and up to +60°C (-40 °F and up to 140°F) the camera is highly versatile.

WV-SBV131M / WV-SBV111M

Reduced Installation Time

The i-PRO SmartHD Series cameras include a number of features for reducing the time required for installation.
If you want to change the camera direction after installation, the camera direction can be changed in 90° steps without removing the base (SFV, SFR, SFN models).
The dome cover can also be easily removed to change the direction of the lens.
For Outdoor Box type cameras (SPW models), the stay can be bent to one of two levels to allow installation with a high degree of freedom.

115 degree

ABF (Auto back Focus)

Auto Back Focus

The ABF feature automatically adjusts the image sensor position when changing from color to B/W mode, optimize the back focus required for clear, sharp images. In addition, the one-push Auto Back Focus feature sharply reduces the time required to focus cameras during installation, allowing focus to be set using the optional system controller.
The ABF function can also automatically sense and adjust to slight focal length changes due to parts warping caused by temperature changes in the area where the camera is installed.
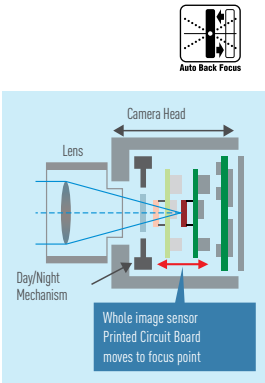
Camera Head
Lens
Day/Night Mechanism
Whole image sensor Printed Circuit Board moves to focus point

INTELLIGENT VIDEO MOTION DETECTION

The camera itself features intelligent functionality for notifying the administrator about changes to situations or dangers using a variety of methods. This eliminates the need to constantly watch the screen in the control room for reducing the TCO.
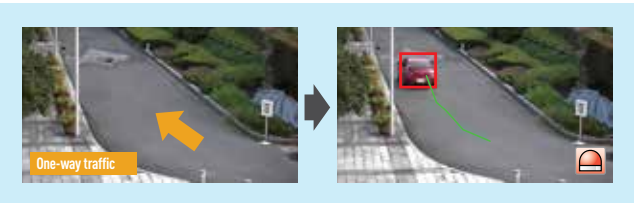
INTRUDER DETECTION
Crossing over the fence

Detection Area | Detection Area
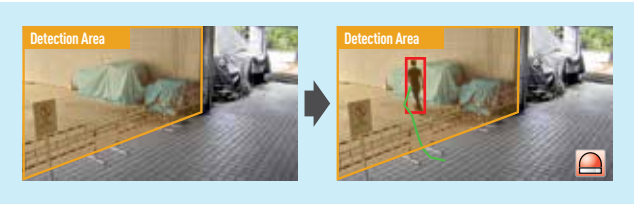
Detects
- the motion of objects in the viewing or detection area. Frames and tracks are displayed around the detected moving object in the live image. Up to 8 objects can be detected simultaneously.

LOITERING DETECTION
Objects staying longer than a specified time

Detection Area | Detection Area

Detects
- objects loitering for longer than a specified time, from 10 sec to 5 min.

DIRECTION DETECTION *1
Objects moving in a specified direction

One-way traffic

Detects
- objects moving in a specified direction. Up to 8 directions can be specified.
*1 Type 1, Type 2, Type 3 network cameras(Refer to the specification pages P.12 - 27) except for WV-SFV481 and WV-SFN480

SCENE CHANGE DETECTION
Interference such as blockage of the lens with a cloth or spray paint

Detects
- interference caused by tampering with the camera, such as a manual change in the camera direction or blockage of the lens with a cloth or spray paint.

OBJECT DETECTION *2
Removed Object Detection

Abandoned Object Detection

Detects
- alerts the operator when a left or removed object is detected.
*2 Type 2, Type 3 network cameras (Refer to the specification pages P.12 - 27) only
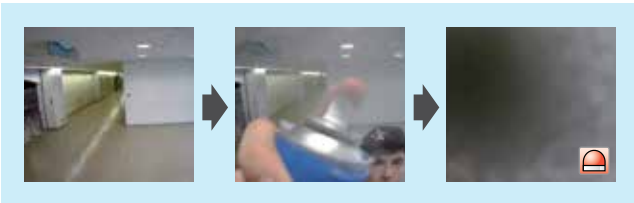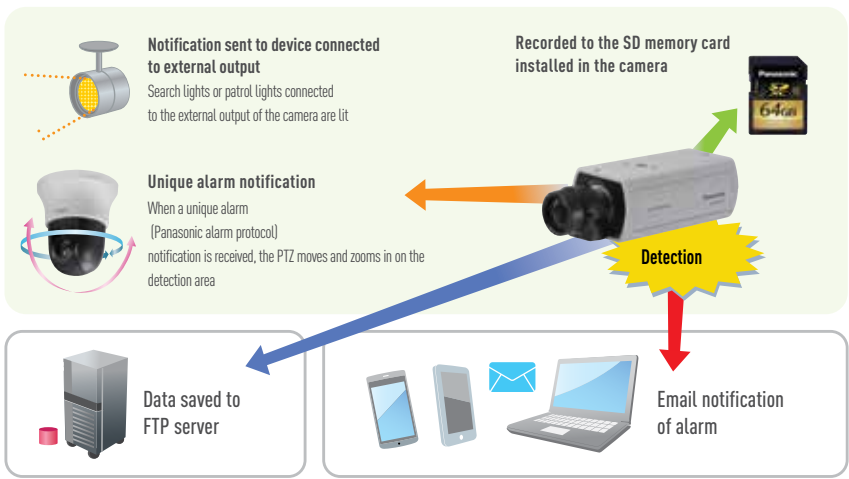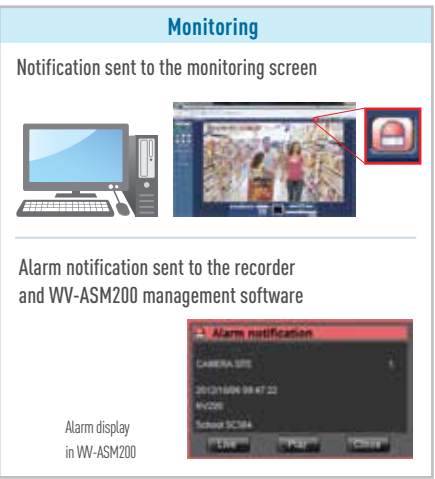
CROSS LINE DETECTION *2
A person who crosses the virtual line to the specified direction

Detects
- alerts the operator when people or objects cross the imaginary lines.
*2 Type 2, Type 3 network cameras (Refer to the specification pages P.12 - 27) only

ACTIONS WHEN AN ALARM IS DETECTED

Monitoring

Notification sent to the monitoring screen

Alarm notification sent to the recorder and WV-ASM200 management software

Alarm display in WV-ASM200

Notification sent to device connected to external output
Search lights or patrol lights connected to the external output of the camera are lit

Recorded to the SD memory card installed in the camera

64GB

Unique alarm notification
When a unique alarm (Panasonic alarm protocol) notification is received, the PTZ moves and zooms in on the detection area

Detection

Data saved to FTP server

Email notification of alarm

*Supported functions and specifications differ according to the models. See the specifications for each model.

*Supported functions and specifications differ according to the models. See the specifications for each model. To enable i-VMD, please add the optional WV-SAE200 software.

PANASONIC UNVEILS AERO PTZ CAMERA FOR EXTREME ENVIRONMENTS

Panasonic has introduced the Aero PTZ, a new, environmentally rugged pan/tilt/zoom (PTZ) camera built to deliver high-performance surveillance in extreme weather conditions. Lightweight at approx. 17.64 pounds, the Aero PTZ is designed to operate in mission-critical applications including vital infrastructure in cities, ports, airports, traffic, highways, railways and more.

AeroPTZ

FULL HD RESOLUTION WITH 360-DEGREE VIEWING

- The Aero PTZ delivers Full HD resolution of 1080p at 60 fps with a 30X optical zoom lens
- Hybrid image stabilization suppresses vibrations between 1 to 30 HZ, to keep images stable
- 360-degree Sphere Vision 3D viewing provides 360-degree continuous panning and +/- 90-degree tilt range
- IR Illuminator is integrated with a zoom interlocking lens, which provides up to an additional 500 feet of visibility in complete darkness (Optional)
- Integrated with Smart Coding technology that reduces bandwidth up to 75% without sacrificing image quality
- Super Dynamic Light Range Compensation ensures and a wider dynamic range compared to conventional cameras

HIGHLY RUGGED, SLEEK BODY DESIGNED FOR EXTREME CONDITIONS

- High strength, sleek fiber glass body and borosilicate glass provides salt and air corrosion protection, making it highly durable in even the toughest weather conditions from salty wind gusts, to harsh sunshine to the severe artic cold.
- Unique intelligent-radius bodyline minimizes wind drag for more stability and prevents snow and dirt accumulation
- Fully water and dust proof conforming to IP66, IP67, NEMA-4X compliant and IK10 environmental specifications
- Operates in the hottest and coldest conditions from -58°F to +140°F
- Wind load durability at 135mph (operational)
- Built-in wiper and defroster

AERO PTZ CAMERA ACCESSORIES

WV-SUD6FRL1
Optional IR-LED

PB24
Multi-Functional,
Heavy Duty Power Box

PWM638
Wall Mount

PACA4
Outdoor Corner Mount

PAPM
Pole Mount Bracket

Panasonic

EXTREME PERFORMANCE UNDER EXTREME CONDITIONS

WV-SUD638
RUGGED PTZ CAMERA FOR EXTREME ENVIRONMENTS
1080p 60fps
30x Optical Zoom

AERO-DYNAMIC DESIGN
360° Spherical profile withstands hurricane force winds up to 135mph

IR ILLUMINATOR
Provides up to 500 feet of visibility in complete darkness (Optional)

FAST AND FLEXIBLE
360° continuous panning, up to 200° per second and +/- 90-degree tilt range

HIGH-STRENGTH FIBER GLASS BODY
Light-weight body (approx. 17 lbs) resists salt air corrosion, conforms to ISO14993 and is IK10 compliant

FLEXIBLE POWER OPTIONS
Operates from 100 to 240 volts AC or PoE (60W)

INTEGRATED WIPER & DEFROSTER
Ensures clear visibility in wet and icy conditions

INTEGRATED WITH SMART CODING
Advanced compression technology that reduces bandwidth up to 75% without sacrificing video quality

HYBRID IMAGE STABILIZATION
Gyro-driven technology suppresses vibrations between 1 to 30 Hz to keep images stable

WIDE OPERATING TEMPERATURES
Delivers high performance in extreme hot or cold environments -58 °F to +140 °F

WATER AND DUST PROOF
Conforms to IP66, IP67, NEMA-4X compliant

EXTENSIVE MOUNTING OPTIONS
Pre-engineered pole mount, wall mount, and corner mounts are available

Shown with optional IR LED

AeroPTZ

ULTRA-HIGH 4K PICTURE QUALITY FOR DETAILED, WIDE-AREA MONITORING WITH A SINGLE CAMERA

Now Featuring H.264 Smart Coding GOP Technology.
Up to 80% lower bandwidth with the same image quality.

4K ULTRA HD

TRUE **4K**

WV-SPV781L	WV-SFV781L
4K Vandal Resistant Weatherproof Network Camera	4K Vandal Resistant Weatherproof Dome Network Camera

ULTRA HIGH-DEFINITION, 4K PICTURE QUALITY

Ultra HD 4K cameras offer 27 times the resolution of conventional analog cameras (VGA), nine times that of standard HD (1,280 x 720) and four times that of Full HD (1,920 x 1,080). This means that the finer details of images remain clear even when you need to magnify only a part of the image.

The high performance lens used by Panasonic's 4K cameras provides uniformly high-resolution images from the center out to the edges.

4K (3,840 x 2,160)
Full HD (1,920 x 1,080)
HD (1,280 x 720)
VGA (640 x 480)

CROPPING FUNCTION

A given area within a single image can be selected, cropped and displayed. For example, areas with high monitoring priority, such as a parking garage entrance or a hallway, can be selected and displayed for easy viewing. You can still keep an eye on the overall image while also focusing on specific areas. With PTZ cameras, when the lens is pointed in a single direction, other areas go out of view during that time, but with a 4K camera you can monitor the entire area while also watching specific areas requiring more focused monitoring.

4K (3,840 x 2,160)
HD (1,280 x 720) x 4
Cropped image 1
Cropped image 2
Cropped image 3
Cropped image 4

WIDE-AREA MONITORING

A single 4K camera can effectively monitor a wider area, which allows you to reduce the total number of cameras while also eliminating blind spots. Monitoring can be performed not only at vertical and horizontal angles, but for deeper depths as well.

And, even when monitoring within the same area, 4K's increased range means that the number of units required is reduced substantially compared to that of conventional cameras. This translates into reduced costs for the cameras themselves, less installation time and labor, and lower maintenance costs.

4K-ready monitors can also reduce the number of monitors needed in the control room.

HD 4K Monitoring range of HD, 4K cameras

LOW LIGHT READY

The camera's ultra-high 4K resolution allows it to capture color images in dim, low-light conditions. In even darker conditions, the camera can use its monochrome inversion function to switch to black-and-white images, and in zero-light conditions it can accurately display what is happening in front of it using infrared LED vision.

Light near subject : 1 lx

HIGH-POWER 6X ZOOM LENS WITH AN ULTRA-WIDE ANGLE OF 100°

An optical 6x zoom lens comes standard. The viewing angle range and zoom power can be set in line with conditions where the camera is installed.

Using a proprietary 3-drive lens system, Panasonic has developed a high-power 6x zoom lens with an ultra-wide viewing angle of 100°, a type of lens that is extremely difficult to produce using conventional optical design methods.

The lens is capable of capturing an extremely wide area, allowing effective 4K coverage of outdoor areas.

Zoom 1x 2x 4x 6x

- Ultra-wide-angle 100°: Wide-angle monitoring of parking lots, stadiums etc. utilizing 4K resolution
- Telephoto 17°: Monitoring of individuals or crowds from a distance

PANASONIC'S TRUE 4K TECHNOLOGY

TRUE **4K**

Panasonic's Propriety 3-Drive Lens System
The i-PRO TRUE 4K NW Camera is equipped with Panasonic's proprietary 3-drive lens system, which simultaneously drives two zoom lenses and one focus lens. Having three lenses all driven independently allows them to be smaller and their drive areas reduced, and has thus enabled us to make the camera compact enough to fit in a standard camera body while providing a high-power 6x zoom with high 4K picture quality viewed from an ultra-wide-angle of 100°.

Refined Resolution and Superior Contrast for a Higher Level of Video Imaging
In order to create a sharp, clear texture, 12 lenses in four groups are used to provide the ultra-high resolution expected of 4K in every part of the image, from center to edge. Both a higher level of representational precision and a more compact lens system are achieved. Plus, all lenses are glass, while aspheric lenses are also used extensively to reduce aberrations to the ultimate degree. The clear depiction, sharp resolution and beautiful color reproduction necessary for true 4K monitoring have all been successfully achieved.

EASY INSTALLATION

Various design features have been added to shorten installation times. The camera has also been designed to be capable of pointing in the preferred direction at the preferred location.

Dome Type WV-SFV781L
When attached to the mounting plate, the camera's direction can be easily changed at intervals of 90°. Rotating the viewing area around the lens further allows the lens to be pointed in the desired direction. The combination of a 6x optical zoom and autofocus also shortens the amount of time required for fine tuning the installation.

Box Type WV-SPV781L
A total of three adjustment points on the camera base and arms enables its position to be fine tuned to allow accurate pointing.

DELIVERING SHARPER IMAGES WITH HIGHER SENSITIVITY

Presenting a 9 Megapixel 360-degree Network Camera with Built-In Analytics.
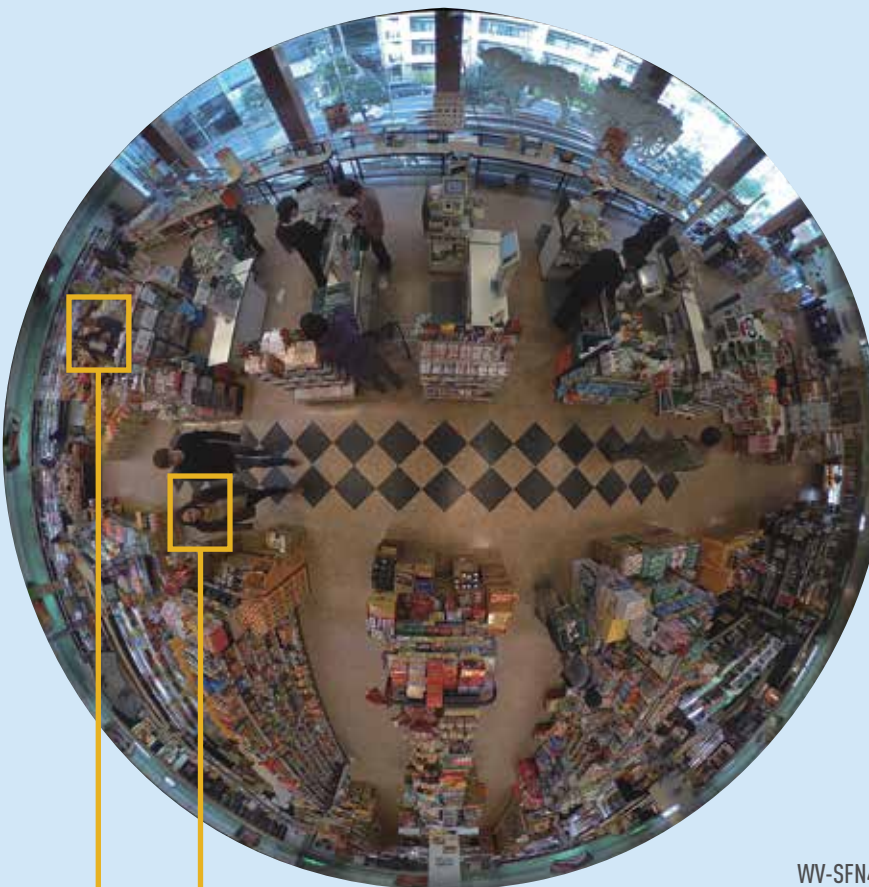
ULTRA 360
4K ENGINE

WV-SFN480	WV-SFV481
360-degree Indoor Dome 9 Megapixel Network Camera	360-degree Vandal Resistant Outdoor Dome 9 Megapixel Network Camera

9M (3K × 3K) HIGH-RESOLUTION H.264 PERFORMANCE ENABLES SHARP RENDERING OF OBJECTS AND PEOPLE'S FACES AT THE EDGE SECTIONS OF THE FISHEYE
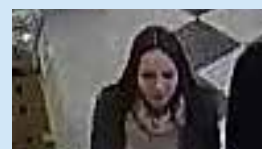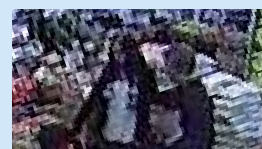
NOW WITH SMART CODING

UP TO 80% BANDWIDTH REDUCTION

26 ft

13 ft

WV-SFN480

WV-SF438

COMPLETE WITH POWERFUL ANALYTICS BUILT-IN*

HEAT MAP

This provides visualization of the traffic patterns by people and how long they stay in one place. For example, you can place products based on how people tend to flow within the store and arrange objects so that they do not interfere with the movement of people.

Requires WV-ASM300/ASM200 client.

PEOPLE COUNTING

This counts the number of people passing through a selected preset location. The People Counting function can provide statistics on the number of people entering and leaving a specific zone and other useful data.
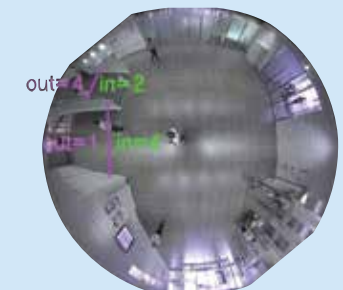
MOVING OBJECT REMOVAL (MOR)

Enables monitoring of changes only to the surrounding environment by removing people and other moving objects from the video. This function can be used with camera images for confirming how products placed in a salesroom are selling while also respecting the privacy of customers in store surveillance.

*To enable analytics, please add the optional WV-SAE200 software.

out 4 in 2

The ULTRA 360-degree lineup features the "Three Ultras" for establishing a new standard for video monitoring.

ULTRA HIGH RESOLUTION

Includes a 12-megapixel high-sensitivity sensor capable of 4K image output for producing high-resolution images up to 9M (3K × 3K) in Fisheye mode. Detailed monitoring in all directions using the wide range of distribution modes and Multi-stream. (Fisheye mode, Panorama mode, Double Panorama mode, Quad PTZ mode, Single PTZ mode, 4 Stream mode).

ULTRA HIGH SENSITIVITY

Provides natural-looking, crystal-clear images even in dim locations. Includes a new powerful image sensor and new lens. Automatic switching between day/night shooting modes and the linked Auto Back Focus enables monitoring even in dim environments.
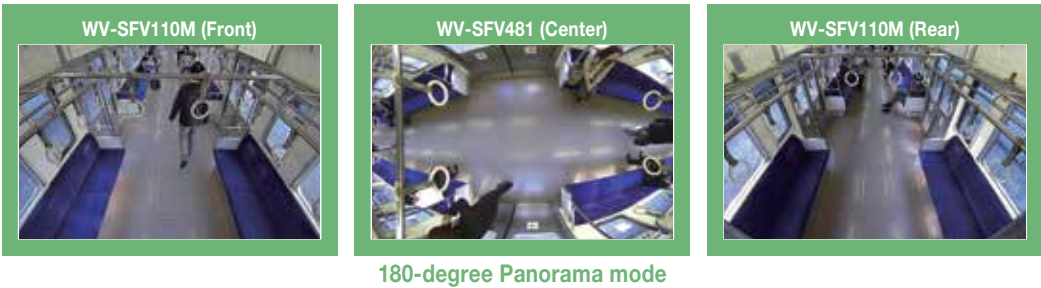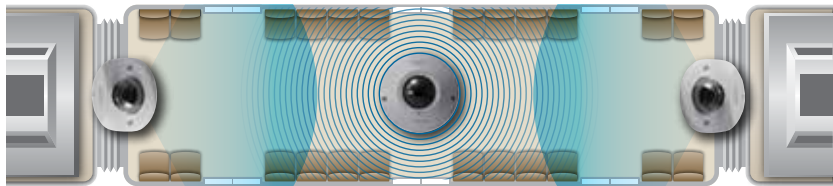
ULTRA INTELLIGENT

Heat-map / People Counting (Cross line) / MOR (Moving Object Remover). Focuses on the movement of people for providing a video-based intelligent solution for use in marketing.
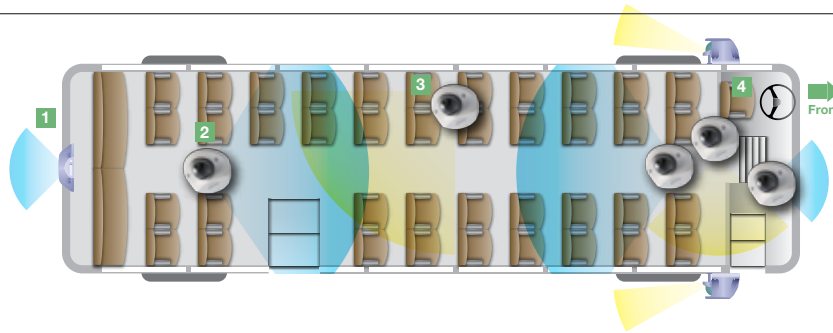
TRANSIT SURVEILLANCE SOLUTIONS

Our NEW i-PRO Transit solution equips transit agencies with the tools to provide a safer environment for bus passengers and drivers while protecting the vehicles from theft and vandalism and reducing expensive manpower requirements to manually upload video data. The system provides complete video surveillance of the inside and outside of the bus—improving response times to incidents as well as increasing the chances of arrest and conviction should a crime occur, helping reduce time spent in litigation.

IN TRAINS

WV-SFV110M (Front) WV-SFV481 (Center) WV-SFV110M (Rear)

180-degree Panorama mode

IN BUSES

1 2 3 4

Wide Coverage without Blind Spots
The application of rain-wash coating to the dome cover provides clearer visibility, allowing good security to be maintained even when the camera is installed in an environment subject to rain or water splashing. In addition, the coating resists attachment of dirt to the dome cover, and also allows dirt to be washed off easily during rainfall or other exposure to water.

Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock"
EN50155 "Railway applications": Electronic equipment used on rolling stock
EN45545 "Fire safety on rolling stock": Preventive fire protection in railway vehicles - Fire behavior and fire side effects of materials and parts.

TRANSIT SOLUTION RELATED PRODUCTS

4K ULTRA HD ENGINE

360-degree Dome Network Cameras

WV-SFV481
- 360° monitoring with a wide variety of transmission modes:
  Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264)
- 9 mega (2,992x2,992) pixel images up to 15 fps by new 4K ULTRA HD engine
- Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock"
- Low profile design for discrete installation
- Vandal resistant mechanism for high reliability
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X (UL50), NEMA 4X compliant

WV-S4550LM
- 360° monitoring with a wide variety of transmission modes:
  Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264/H.265/VGA)
- 1080p Full HD images up to 30 fps
- Compatible with EN50155 "Railway applications" and DIN 5510-2 "Fire safety on rolling stock"
- Low profile design for discrete installation
- Vandal resistant mechanism for high reliability
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X (UL50), NEMA 4X compliant

Compact Size Dome Network Camera

WV-SFV130M/110M
- 1080p Full HD images (WV-SFV130M), 720p HD images (WV-SFV110M) up to 30 fps
- High sensitivity with Day/Night (Electrical) function: 0.04 lx (Color), 0.03 lx (B/W) at F2.3 (WV-SFV110M)
- Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock".
- Low profile design for discrete installation
- Vandal resistant mechanism for high reliability
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X (UL50), NEMA 4X compliant

Rugged Mobile Network Camera

WV-SBV131M / WV-SBV111M
- 1080p Full HD images (WV-SBV131M) , 720p HD images (WV-SBV111M) up to 30 fps
- High sensitivity with Day/Night (Electrical) function: 0.04 lx (Color), 0.03 lx (B/W) at F2.2 (WV-SBV111M)
- The camera conforms to the IP66, Type 4X (UL50) and IP6K9K, is compliant with NEMA 4X ratings, and provides high dust resistance and waterproof performance.
- Achieves high-level vibration resistance with EN50155 and MIL-STD-810G compliance
- Adoption of a scratch resistant dome cover with a compact and sleek design is optimal for cameras installed on the outside of a vehicle.
- Vandal resistant mechanism for high reliability

Transit Recorders

i-PRO TRANSIT NETWORK VIDEO RECORDER
- Powered by the Intel® Core™ i7 Processor for high-speed performance
- Runs Windows® OS for optimal software compatibility
- Supports two M12 Ethernet connections

RECOMMENDED MOBILE RECORDER FOR BUS (VTC7110)*
Bring unrivaled computing power and exceptional video graphics handling onto the bus with this rugged, mobile-ready recorder. With its ability to record and wirelessly transmit HD video from up to four IP cameras (up to 16 with an optional expansion switch), transit control rooms can be given complete situational awareness of the vehicle in real time.

*This is a product from NEXCOM International Co., Ltd. Contact a sales representative to purchase it.

WV-ASF900W—FacePro™

Windows® server-based face recognition and analytics platform featuring high-speed face searching and matching.

The WV-ASF900W FacePro™ Facial Recognition is a software solution and software engine that automatically performs verification of a person's face using live video streams or digital images from Panasonic i-PRO cameras to match against a database of enrolled faces and perform notification and alerting of face matches. Boasting a real-time processing capacity of up to 20 cameras per server, FacePro can execute high-speed searches of up to 1,000 registered reference faces on both live and recorded video, and each server can store up to 10 million detected face images depending on configuration.

For flexibility, reference face images can be registered from source video or imported via BMP, JPG and PNG files and can be searched for a match in a matter of seconds. FacePro also provides advanced age and gender analytics reporting and the ability to set flexible alarm triggers on matched faces using live cameras. The platform can support multiple simultaneous client sessions with Panasonic's WV-ASM200W and WV-ASM970W software applications.

In addition to live-camera face matching, FacePro features the ability to perform searches and display face matches from a database of historical captured faces. Face match results are displayed for each camera in the system and in chronological order, enabling you to quickly track a person of interest moving through your facility. More refined face searching can be performed by specific camera or date.

How Do I Benefit from FacePro Facial Recognition?

It reduces costs by eliminating personnel to monitor entrances. It provides instant notification, and lowers your risk by reducing and preventing violent confrontations during capture, as well as by instantly alerting you of unwanted persons entering your facility. It's simple and easy to use and does not require physical contact, and it's the only feasible solution to use with large crowds in your facility. In addition, it improves your service and sales potential by recognizing customers.
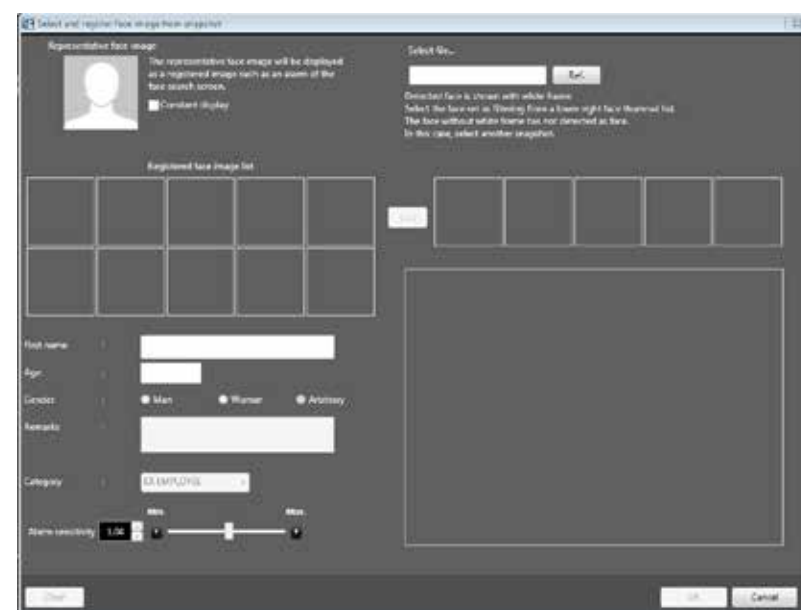
Its analysis capabilities permit you to count the number of detected faces and evaluate their age and gender, displaying the results on the screen as a statistical graph. This graphical view of a visitor's age and gender can be provided with a 15-minute, 30-minute, hourly, daily, weekly and monthly view for retail and marketing applications. This statistical data can be saved as a CSV file for analytical use.

- Fast multicamera face matching on both live and previously captured video
- Real-time processing capacity of up to 20 cameras* per server with a 10 million-face database capacity
- Enrollment of 1,000 "Known Faces" into "Watch Lists" for Instant Match Alerts
- High-speed search of video recordings based on reference faces (5 million captured faces searched in about 3 seconds)
- Utilizes Face Best-Shot option (SAE-ASF), available for Panasonic i-PRO cameras (WV-S1131, WV-S1111 and WV-SC385 models and WV-SPN631, WV-SPN611, WV-SPN531, WV-SPN311 models and WV-SFV631LT model)
- Flexible alarm triggers on matched faces using live cameras
- Requires ASM300/ASM200/ASM970 client software
- Ideal for Panasonic customers who have either WJ-ND400 or WJ-NV200/300 NVR
- Compatible with Genetec Security Center 5.4, 5.5, 5.6

*12 Cameras or more require dual-cpu FacePro server model.

Panasonic

Page 26

CAMERA TYPE		PAN TILT ZOOM		
Appearance		WV-SUD638 HD1080P	WV-X6531N HD1080P (NEW)	WV-X6511N HD720P (NEW)
Sensor		1/3 MOS	1/2.8 MOS	1/2.8 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG
	H.265/H.264 multi stream	4	4	4
	JPEG multi stream	6 (Variable)	3 (Variable)	3 (Variable)
	Smart Coding	—	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080	1280 x 720
	4 : 3	1280 x 960	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.265/H.264	60 fps (1080p)	60fps (1080p)	60fps (720p)
	JPEG	60 fps (1080p)	30fps (3 MP)	30fps (2.4 MP)
Super Dynamic / WDR / BLC		Super-D	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus	Auto Focus
Min. Illumination	Color	0.06 lx @F1.6	0.015 lx @F1.6	0.011 lx @F1.6
	Color (Sens up)	0.004 lx (16x)	0.001 lx (16x)	0.0007 lx (16x)
	B/W	0.0 lx @F1.6 (w/IR)	0.006 lx @F1.6	0.005 lx @F1.6
	B/W (Sens up)	—	0.0004 lx (16x)	0.0003 lx (16x)
Lens		f= 4.3 to 129 mm, F1.6	f = 4.25 to 170 mm, F1.6 Motorized	f = 4.25 to 170 mm, F1.6 Motorized
Angular field of view	16 : 9	H: 2.3 to 64 deg. / V: 1.3 to 38 deg.	H : 2.1 to 65 deg. / V : 1.2 to 39 deg.	H : 2.1 to 65 deg. / V : 1.2 to 39 deg.
	4 : 3	H: 1.8 to 50 deg. / V: 1.3 to 38 deg.	H : 1.6 to 51 deg. / V : 1.2 to 39 deg.	H : 1.6 to 51 deg. / V : 1.2 to 39 deg.
Pan	Range	Endless	Endless	Endless
	Speed	200 deg/sec	300 deg/sec	300 deg/sec
Tilt	Range	Upright: -50 to +90 deg. / Forward tilt: -90 to +90 deg. / Hanging: +30 to -90 deg.	-15 to +195 deg	-15 to +195 deg
	Speed	200 deg/sec	300 deg/sec	300 deg/sec
Optical Zoom		30x	40x	40x
Digital Zoom		12x	16x	16x
360 Pan-Flip		—	—	—
Number of Preset Positions		256	256	256
Patrol		Yes	Yes	Yes
Auto Tracking		Yes	Yes (advanced)	Yes (advanced)
Image Stabilizer		—	Yes	Yes
iA (Intelligent Auto)		—	Yes	Yes
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		—	Yes (Type 4)	Yes (Type 4)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes	Yes / Yes
	In (Built-in MIC)	—	—	—
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	—	Yes (SDXC)	Yes (SDXC)
	Alter Detection	—	Yes	Yes
	Audio REC	—	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)
Monitor Out		—	—	—
Vandal Resistant		20J, IK10	IK10	IK10
Water and Dust Resistance		IP67 / IP66 / NEMA 4X	IP66, NEMA 4X compliant	IP66, NEMA 4X compliant
Temperature		-58°F to +140°F	-58°F to +140°F (AC24V/60WPoE) -22°F to +140°F (PoE+)	-58°F to +140°F (AC24V/60WPoE) -22°F to +140°F (PoE+)
Power Source		AC100 to 240V / 60W Injector	24 V AC / PoE+ / 60W PoE Injector	24 V AC / PoE+ / 60W PoE Injector
Dehumidification device		Yes	Yes	Yes
Other Functions		Onvif S, Built-in wiper, Defloster	Easy setup package, heater, ClearSight coating	Easy setup package, heater, ClearSight coating
Mounting Options		See page 66	See page 65, 66	See page 65, 66

26

(*2): Only for SD REC   (*3): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)   (*4): Tested PoE injector

Page 27

CAMERA TYPE		PAN TILT ZOOM		
Appearance		WV-SW598A HD1080P	WV-S6530N HD1080P (NEW)	WV-SW397B HD720P
Sensor		1/3 MOS	1/2.9 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.265 / H.264 / JPEG	H.264 / JPEG
	H.265/H.264 multi stream	2	4	2
	JPEG multi stream	6	3 (Variable)	6
	Smart Coding	—	Yes	—
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080	1280 x 720
	4 : 3	1280 x 960	2048 x 1536(*1)	1280 x 960
Max. FPS @Max. Resolution	H.265/H.264	30 fps (1080p)	60fps (1080p)	30 fps (2.4 MP)
	JPEG	30 fps (1080p)	30fps (3 MP)	30 fps (2.4 MP)
Super Dynamic / WDR / BLC		Super-D	Enhanced SD	Super-D
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus	Auto Focus
Min. Illumination	Color	0.15 lx @F1.6	0.015 lx @F1.6	0.3 lx @F1.6
	Color (Sens up)	0.009 lx (16x)	0.001 lx (16x)	0.019 lx (16x)
	B/W	0.018 lx @F1.6	0.006 lx @F1.6	0.04 lx @F1.6
	B/W (Sens up)	0.001 lx (16x)	0.0004 lx (16x)	0.003 lx (16x)
Lens		f= 4.3 to 129 mm, F1.6	f = 4.0 to 84.6 mm, F1.6 Motorized	f= 4.3 to 129 mm, F1.6
Angular field of view	16 : 9	H: 2.6 to 64.6 deg. / V: 1.6 to 38.2 deg.	H : 3.4 to 73 deg. / V : 2.0 to 42 deg.	H: 2.6 to 64.6 deg. / V: 1.6 to 38.2 deg.
	4 : 3	H: 1.4 to 44.4 deg. / V: 1.1 to 33.8 deg.	H : 2.9 to 61 deg. / V : 2.2 to 46 deg.	H: 1.4 to 44.4 deg. / V: 1.1 to 33.8 deg.
Pan	Range	Endless	0 to +350 deg.	Endless
	Speed	300 deg/sec	300 deg/sec	300 deg/sec
Tilt	Range	-15 to +195 deg.	-30 to +90 deg.	-15 to +195 deg.
	Speed	300 deg/sec	100 deg/sec	300 deg/sec
Optical Zoom		30x	21x	30x (45x with Extra Zoom at HD)
Digital Zoom		12x	16x	12x
360 Pan-Flip		—	Yes	—
Number of Preset Positions		256	256	256
Patrol		Yes	Yes	Yes
Auto Tracking		Yes (advanced)	Yes (advanced)	Yes (advanced)
Image Stabilizer		—	Yes	Yes
iA (Intelligent Auto)		—	Yes	Yes
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		—	Yes (Type 4)	—
VIQS		Yes (2-areas)	Yes (8-areas)	Yes (2-areas)
Max. Connection		14	14	14
Audio	In (Line) / Out	Yes	Yes / Yes	Yes
	In (Built-in MIC)	—	—	—
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Alter Detection	—	Yes	—
	Audio REC	Yes	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)
Monitor Out		Yes (Composite)	—	Yes (Composite)
Vandal Resistant		20J, IK10	IK10	20J, IK10
Water and Dust Resistance		IP66 / NEMA 4	IP66, NEMA 4 compliant	IP66
Temperature		-58°F to +131°F (24 V / 60 W PoE) (*4) -22°F to +131°F (PoE+)	-40°F to +140°F (AC 24 V) -22°F to +140°F (PoE+)	-58°F to +131°F (24 V) -22°F to +131°F (PoE+)
Power Source		24 V AC / PoE+	24 V AC / PoE+	24 V AC / PoE+
Dehumidification device		Yes	Yes	Yes
Other Functions		Onvif S/G, Built-in heater, Rain wash coating, Auto Eyelid Mechanism	Easy setup package,heater, ClearSight coating	Onvif S/G, Built-in heater, Auto Eyelid Mechanism, Rain wash coating (WV-SW397A)
Mounting Options		See page 65, 66	See page 65, 66	See page 65, 66

Panasonic

CAMERA TYPE		PAN TILT ZOOM		
Appearance		WV-SW395A HD720P	*NEW* WV-S6131 HD1080P	WV-SC588A HD1080P
Sensor		1/3 MOS	1/2.8 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / MPEG-4 / JPEG	**H.265** / H.264 / JPEG	H.264 / JPEG
	H.265/H.264 multi stream	2	4	2
	JPEG multi stream	6	3 (Variable)	6
	Smart Coding	—	Yes	—
Max. Resolution	16 : 9	1280 x 720	1920 x 1080	1920 x 1080
	4 : 3	1280 x 960	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.265/H.264	30 fps (1.3 MP)	60fps (1080p)	30 fps (1080p)
	JPEG	30 fps (1.3 MP)	30fps (3 MP)	30 fps (1080p)
Super Dynamic / WDR / BLC		Super-D	Enhanced SD	Super-D
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus	Auto Focus
Min. Illumination	Color	0.5 lx @F1.6	0.015 lx @F1.6	0.5 lx @F1.6
	Color (Sens up)	0.03 lx (16x)	0.001 lx (16x)	0.03 lx (16x)
	B/W	0.06 lx @F1.6	0.006 lx @F1.6	0.06 lx@F1.6
	B/W (Sens up)	0.004 lx (16x)	0.0004 lx (16x)	0.004 lx (16x)
Lens		f = 4.7 to 84.6 mm, F1.6	f = 4.25 to 170 mm, F1.6 Motorized	f = 4.3 to 129 mm, F1.6
Angular field of view	16 : 9	H: 3.2 to 55.2 deg. / V: 1.9 to 31.9 deg.	H : 1.9 to 66 deg./ V : 1.1 to 39 deg.	H: 2.34 to 65.1 deg. / V: 1.36 to 38.4 deg.
	4 : 3	H: 3.2 to 55.2 deg. / V: 2.4 to 42.1 deg.	H : 1.4 to 51 deg./ V : 1.1 to 39 deg.	H: 1.6 to 45.2 deg. / V: 1.2 to 34.3 deg.
Pan	Range	0 to +350 deg.	Endless	Endless
	Speed	300 deg/sec	300 deg/sec	300 deg/sec
Tilt	Range	-30 to +90 deg.	-25 to +205 deg	-25 to +205 deg.
	Speed	100 deg/sec	300 deg/sec	300 deg/sec
Optical Zoom		18x	40x	30x
Digital Zoom		12x	16x	12x
360 Pan-Flip		Yes	—	—
Number of Preset Positions		64	256	256
Patrol		—	Yes	Yes
Auto Tracking		Yes	Yes (advanced)	Yes (advanced)
Image Stabilizer		—	Yes	—
iA (Intelligent Auto)		—	Yes	—
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		—	Yes (Type4)	—
VIQS		—	Yes (8-areas)	Yes (2-areas)
Max. Connection		14	14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes	Yes / Yes
	In (Built-in MIC)	—	—	—
	Codec	G.711 / G.726	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	—	Yes	Yes
SD memory Card	Slot	Yes (SDHC)	Yes (SDXC)	Yes (SDXC)
	Alter Detection	—	Yes	—
	Audio REC	—	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*2)
Monitor Out		Yes (Composite)	—	Yes (Mini-jack)
Vandal Resistant		20J, IK10	—	—
Water and Dust Resistance		IP66	—	—
Temperature		-40°F to +122°F (24 V) -22°F to +122°F (PoE+)	14°F to +122°F	+14°F to +131°F
Power Source		24 V AC / PoE+	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	—	—
Other Functions		Onvif S, Built-in heater, Rain wash coating (WV-SW395A)	Easy setup package, Dome less	Onvif S/G, Dome less
Mounting Options		See page 65, 66	See page 63, 64	See page 63, 64

[*2]: Only for SD REC   (*3): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

CAMERA TYPE		PAN TILT ZOOM		
Appearance		*NEW* WV-S6111 HD720P	WV-SC387A HD720P	*NEW* WV-S6130 HD720P
Sensor		1/2.8 MOS	1/3 MOS	1/2.9 MOS
Codec and Transmission	Video Codec	**H.265** / H.264 / JPEG	H.264 / JPEG	**H.265** / H.264 / JPEG
	H.265/H.264 multi stream	4	2	4
	JPEG multi stream	3 (Variable)	6	3 (Variable)
	Smart Coding	Yes	—	Yes
Max. Resolution	16 : 9	1280 x 720	1280 x 720	1920 x 1080
	4 : 3	1280 x 960	1280 x 960	2048 x 1536 (*1)
Max. FPS @Max. Resolution	H.265/H.264	60fps (720p)	30 fps (2.4 MP)	60fps (1080p)
	JPEG	30fps (1.3 MP)	30 fps (2.4 MP)	30fps (3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Super-D	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus	Auto Focus
Min. Illumination	Color	0.015 lx @F1.6	0.3 lx @F1.6	0.015 lx @F1.6
	Color (Sens up)	0.001 lx (16x)	0.019 lx (16x)	0.001 lx (16x)
	B/W	0.006 lx @F1.6	0.04 lx @F1.6	0.006 lx @F1.6
	B/W (Sens up)	0.0004 lx (16x)	0.003 lx (16x)	0.0004 lx (16x)
Lens		f = 4.25 to 170 mm, F1.6 Motorized	f= 4.3 to 129 mm, F1.6	f = 4.0 to 84.6 mm, F1.6 Motorized
Angular field of view	16 : 9	H : 1.9 to 66 deg. / V : 1.1 to 39 deg.	H: 2.34 to 65.1 deg. / V: 1.36 to 38.4 deg.	H : 3.5 to 74 deg. / V : 2.0 to 42 deg.
	4 : 3	H : 1.4 to 51 deg. / V : 1.1 to 39 deg.	H: 1.6 to 45.2 deg. / V: 1.2 to 34.3 deg.	H : 3.0 to 61 deg. / V : 2.3 to 46 deg.
Pan	Range	Endless	Endless	0 to +350 deg.
	Speed	300 deg/sec	300 deg/sec	300 deg/sec
Tilt	Range	-25 to +205 deg	-25 to +205 deg.	-30 to +90 deg.
	Speed	300 deg/sec	300 deg/sec	100 deg/sec
Optical Zoom		40x	30x (45x with Extra Zoom at HD)	21x
Digital Zoom		16x	12x	16x
360 Pan-Flip		—	—	Yes
Number of Preset Positions		256	256	256
Patrol		Yes	Yes	Yes
Auto Tracking		Yes (advanced)	Yes (advanced)	Yes (advanced)
Image Stabilizer		Yes	—	Yes
iA (Intelligent Auto)		Yes	—	Yes
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		Yes (Type 4)	—	Yes (Type 4)
VIQS		Yes (8-areas)	Yes (2-areas)	Yes (8-areas)
Max. Connection		14	14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes	Yes / Yes
	In (Built-in MIC)	—	—	—
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Alter Detection	Yes	—	Yes
	Audio REC	Yes	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)
Monitor Out		—	Yes (Mini-jack)	Yes (mini-jack)
Vandal Resistant		—	—	—
Water and Dust Resistance		—	—	—
Temperature		14°F to +122°F	+14°F to +131°F	14°F to +122°F / 14°F to +104°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—	—
Other Functions		Easy setup package, Dome less	Onvif S/G, Dome less	Easy setup package
Mounting Options		See page 65, 66	See page 63, 64	See page 63, 64

[*2]: Only for SD REC   (*3): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

Panasonic

Left Table: PAN TILT ZOOM

CAMERA TYPE		PAN TILT ZOOM	
Appearance		WV-SC385 HD720P	WV-SC384 HD720P
Sensor		1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / MPEG-4 / JPEG	H.264 / MPEG-4 / JPEG
	H.265/H.264 multi stream	2	2
	JPEG multi stream	6	6
	Smart Coding	—	—
Max. Resolution	16 : 9	1280 x 720	1280 x 720
	4 : 3	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.265/H.264	30 fps (1.3 MP)	30 fps (1.3 MP)
	JPEG	30 fps (1.3 MP)	30 fps (1.3 MP)
Super Dynamic / WDR / BLC		Super-D	WDR
Day/Night		Yes (ICR)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus
Min. Illumination	Color	0.5 lx @F1.6	0.6 lx @F1.6
	Color (Sens up)	0.03 lx (16x)	0.038 lx (16x)
	B/W	0.06 lx @F1.6	0.5 lx @F1.6
	B/W (Sens up)	0.004 lx (16x)	0.03 lx (16x)
Lens		f= 4.7 to 84.6 mm, F1.6	f= 4.7 to 84.6 mm, F1.6
Angular field of view	16 : 9	H: 3.2 to 55.2 deg. / V: 1.9 to 31.9 deg.	H: 3.2 to 55.2 deg. / V: 1.9 to 31.9 deg.
	4 : 3	H: 3.2 to 55.2 deg. / V: 2.4 to 42.1 deg.	H: 3.2 to 55.2 deg. / V: 2.4 to 42.1 deg.
Pan	Range	0 to +350 deg.	0 to +350 deg.
	Speed	300 deg/sec	300 deg/sec
Tilt	Range	-30 to +90 deg.	-30 to +90 deg.
	Speed	100 deg/sec	100 deg/sec
Optical Zoom		18x	18x
Digital Zoom		12x	8x
360 Pan-Flip		Yes	Yes
Number of Preset Positions		64	64
Patrol		—	—
Auto Tracking		Yes	—
Image Stabilizer		—	—
iA (Intelligent Auto)		—	—
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	—
VIQS		—	—
Max. Connection		14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes
	In (Built-in MIC)	—	—
	Codec	G.711 / G.726	G.711 / G.726
	Audio Detection Alarm	—	—
SD memory Card	Slot	Yes (SDHC)	Yes (SDHC)
	Alter Detection	—	—
	Audio REC	—	—
External I/O		Yes (3/1)	Yes (3/1)
Monitor Out		Yes (Mini-jack)	Yes (Mini-jack)
Vandal Resistant		—	—
Water and Dust Resistance		—	—
Temperature		+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—
Other Functions		Onvif S	Onvif S
Mounting Options		See page 63, 64	See page 63, 64

(*2): Only for SD REC   (*3): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

Right Table: H.265 FIXED DOME

CAMERA TYPE		H.265 FIXED DOME			
Appearance		NEW WV-S2531LTN HD1080P	NEW WV-S2531LN HD1080P	NEW WV-S2511LN HD720P	NEW WV-S2231L HD1080P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG
	H.265/H.264 multi stream	4	4	4	4
	JPEG multi stream	3 (Variable)	3 (Variable)	3 (Variable)	3 (Variable)
	H.265 / H.264: VBR / AVBR (Advanced VBR)	VBR	VBR	VBR	VBR
	Smart Coding	Yes	Yes	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080	1280 x 720	1920 x 1080
	4 : 3	2048 x 1536 (*1)	2048 x 1536 (*1)	1280 x 960	2048 x 1536 (*1)
Max. FPS @Max. Resolution	H.265 / H.264	60fps (1080p)	60fps (1080p)	60fps (720p)	60fps (1080p)
	JPEG	30fps (3 MP)	30fps (3 MP)	30fps (1.3 MP)	30fps (3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF	ABF
Min. Illumination	Color	0.015 lx @F1.7	0.012 lx @F1.6	0.008 lx @F1.6	0.012 lx @F1.6
	Color (Sens up)	0.001 lx (16x)	0.0008 lx (16x)	0.0005 lx (16x)	0.0008 lx (16x)
	B/W	0.0 lx @F1.7 (w/IR)	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6 (w/IR)
	B/W (Sens up)	—	—	—	—
Lens		f = 9 to 21 mm, F1.7 Motorized	f = 2.8 to 10 mm, F1.6 Motorized	f = 2.8 to 10 mm, F1.6	f = 2.8 to 10 mm, F1.6 Motorized
Angular field of view	16 : 9	H : 14 to 34 deg. V : 8 to 19 deg.	H : 30 to 108 deg. V : 17 to 58 deg.	H : 30 to 108 deg. V : 17 to 58 deg.	H : 30 to 109 deg. V : 17 to 58 deg.
	4 : 3	H : 12 to 28 deg. V : 9 to 21 deg.	H : 25 to 90 deg. V : 19 to 65 deg.	H : 25 to 90 deg. V : 19 to 65 deg.	H : 25 to 90 deg. V : 19 to 65 deg.
Adjusting Angle	Pan	-180 to +180 deg.	-180 to +180 deg.	-180 to +180 deg.	-240 to +120 deg.
	Tilt	-30 to +85 deg.	-30 to +85 deg.	-30 to +85 deg.	-30 to +85 deg.
Optical Zoom		2.3x	3.6x	3.6x	3.6x
Digital Zoom		4x	4x	4x	4x
Image Stabilizer		Yes	Yes	Yes	Yes
Corridor Mode		Yes	Yes	Yes	Yes
iA (Intelligent Auto)		Yes	Yes	Yes	Yes
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		Yes (Type2)	Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		—	—	—	—
Max. Connection		14	14	14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
	In (Built-in MIC)	—	—	—	—
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Alter Detection	Yes	Yes	Yes	Yes
	Audio REC	Yes	Yes	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)
Monitor Out		Yes (mini jack)	Yes (mini jack)	Yes (mini jack)	Yes (mini jack)
Vandal Resistant		50J, IK10	50J, IK10	50J, IK10	IK10
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	—
Temperature		-40°F to +140°F (*4)	-40°F to +140°F (*4)	-40°F to +140°F (*4)	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	Yes	Yes	—
Other Functions		Onvif S/G, Easy setup package, Built-in heater, ClearSight coating, Built-in IR LED	Onvif S/G, Easy setup package, Built-in heater, ClearSight coating, Built-in IR LED	Onvif S/G, Easy setup package, Built-in heater, ClearSight coating, Built-in IR LED	Onvif S/G, Easy setup package, Built-in IR LED
Mounting Options		See page 61, 62	See page 61, 62	See page 61, 62	See page 60, 61

(*1) : w/Super resolution   (*2) : Only for SD REC   (*3) : Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)   (*4) : When the IR LED is ON, the maximum temperature is 50 deg.

Panasonic

H.265 FIXED DOME

CAMERA TYPE		H.265 FIXED DOME			
Appearance		*NEW* i-PRO EXTREME **WV-S2211L** HD720P	*NEW* i-PRO EXTREME **WV-S2131L** HD1080P	*NEW* i-PRO EXTREME **WV-S2111L** HD720P	*NEW* i-PRO EXTREME **WV-S2110** HD720P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	**H.265** / H.264 / JPEG	**H.265** / H.264 / JPEG	**H.265** / H.264 / JPEG	**H.265** / H.264 / JPEG
	H.265 / H.264 multi stream	4	4	4	4
	JPEG multi stream	3 (Variable)	3 (Variable)	3 (Variable)	3 (Variable)
	H.265 / H.264: VBR / AVBR (Advanced VBR)	VBR	VBR	VBR	VBR
	Smart Coding	Yes	Yes	Yes	Yes
Max. Resolution	16 : 9	1280 x 720	1920 x 1080	1280 x 720	1280 x 720
	4 : 3	1280 x 960	2048 x 1536 (*1)	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.265 / H.264	60fps (720p)	60fps (1080p)	60fps (720p)	60fps (720p)
	JPEG	30fps (1.3 MP)	30fps (3 MP)	30fps (1.3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF	ABF
Min. Illumination	Color	0.008 lx @F1.6	0.012 lx @F1.6	0.008 lx @F1.6	0.008 lx @F1.6
	Color (Sens up)	0.0005 lx (16x)	0.0008 lx (16x)	0.0005 lx (16x)	0.0005 lx (16x)
	B/W	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6 (w/IR)	0.007 lx @F1.6
	B/W (Sens up)	—	—	—	0.00044 lx (16x)
Lens		f = 2.8 to 10 mm, F1.6	f = 2.8 to 10 mm, F1.6 Motorized	f = 2.8 to 10 mm, F1.6	f = 2.8 to 10 mm, F1.6
Angular field of view	16 : 9	H : 30 to 109 deg. V : 17 to 58 deg.	H : 30 to 110 deg. V : 17 to 59 deg.	H : 30 to 110 deg. V : 17 to 59 deg.	H : 30 to 110 deg. V : 17 to 59 deg.
	4 : 3	H : 25 to 90 deg. V : 19 to 65 deg.	H : 25 to 90 deg. V : 19 to 66 deg.	H : 25 to 90 deg. V : 19 to 66 deg.	H : 25 to 90 deg. V : 19 to 66 deg.
Adjusting Angle	Pan	-240 to +120 deg.	-240 to +120 deg.	-240 to +120 deg.	-240 to +120 deg.
	Tilt	-30 to +85 deg.	-30 to +85 deg.	-30 to +85 deg.	-85 to +85 deg.
Optical Zoom		3.6x	3.6x	3.6x	3.6x
Digital Zoom		4x	4x	4x	4x
Image Stabilizer		Yes	Yes	Yes	Yes
Corridor Mode		Yes	Yes	Yes	Yes
iA (Intelligent Auto)		Yes	Yes	Yes	Yes
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		Yes (Type2)	Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		—	—	—	—
Max. Connection		14	14	14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes	Yes / Yes	— / —
	In (Built-in MIC)	—	—	—	—
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	—
	Alter Detection	Yes	Yes	Yes	—
	Audio REC	Yes	Yes	Yes	—
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)	—
Monitor Out		Yes (mini jack)	Yes (mini jack)	Yes (mini jack)	Yes (mini jack)
Vandal Resistant		IK10	—	—	—
Water and Dust Resistance		—	—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	PoE
Dehumidification device		—	—	—	—
Other Functions		Onvif S/G, Easy setup package, Built-in IR LED	Onvif S/G, Easy setup package, Built-in IR LED	Onvif S/G, Easy setup package, Built-in IR LED	Onvif S, Easy setup package
Mounting Options		See page 60, 61	See page 60, 61	See page 60, 61	See page 60, 61

(*1) : w/Super resolution   (*2) : Only for SD REC   (*3) : Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)

FIXED DOME

CAMERA TYPE		FIXED DOME				
Appearance		**WV-SFV781L** 4K Engine	**WV-SFV631LT** HD1080P	**WV-SFV631L** HD1080P	**WV-SFV611L** HD720P	**WV-SFV531** HD1080P
Sensor		1/1.7 MOS	1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4	4	4
	JPEG multi stream	2	6 (Variable)	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes (GOP Only)	Yes	Yes	Yes	Yes
Max. Resolution	16 : 9	3840 x 2160	1920 x 1080	1920 x 1080	1280 x 720	1920 x 1080
	4 : 3	4000 x 3000	2048 x 1536 (*1)	2048 x 1536 (*1)	1280 x 960	2048 x 1536 (*1)
Max. FPS @Max. Resolution	H.264	30fps (4K)	60fps (1080p)	60fps (1080p)	60fps (720p)	60fps (1080p)
	JPEG	15fps (12 MP)	30fps (3 MP)	30fps (3 MP)	30fps (1.3 MP)	30fps (3 MP)
Super Dynamic / WDR / BLC		WDR	Enhanced SD	Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF	ABF	ABF
Min. Illumination	Color	0.3 lx @F1.6	0.06 lx @F1.6	0.04 lx @F1.3	0.01 lx@F1.3	0.07 lx @F1.6
	Color (Sens up)	0.02 lx (16x)	0.0045 lx (16x)	0.003 lx (16x)	0.0007 lx (16x)	0.005 lx (16x)
	B/W	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.3 (w/IR)	0.0 lx @F1.3 (w/IR)	0.01 lx @F1.6
	B/W (Sens up)	—	—	—	—	0.0007 lx (16x)
Lens		f=4.2 to 25.2 mm, F1.6 Motorized	f= 9 to 22 mm, F1.6 Motorized	f= 2.8 to 10 mm, F1.3 Motorized	f= 2.8 to 10 mm, F1.3 Motorized	f=2.8 to 9.5 mm, F1.6
Angular field of view	16 : 9	H: 17 to 96 deg. V: 9.3 to 54 deg.	H: 13.8 to 33.0 deg. V: 7.7 to 17.8 deg.	H: 28.8 to 102.6 deg. V: 16.0 to 56.0 deg.	H: 26.4 to 93.7 deg. V: 14.8 to 51.6 deg.	H: 31 to 109 deg. V: 18 to 59 deg.
	4 : 3	H: 17 to 100 deg. V: 13 to 75 deg.	H: 11.5 to 27.0 deg. V: 8.6 to 19.9 deg.	H: 23.7 to 84.3 deg. V: 17.8 to 62.4 deg.	H: 26.4 to 93.7 deg. V: 20 to 69.3 deg.	H: 26 to 89 deg. V: 20 to 66 deg.
Adjusting Angle	Pan	-180 to +180 deg.	-180 to +180 deg.	-180 to +180 deg.	-180 to +180 deg.	-180 to +180 deg.
	Tilt	0 to +85 deg.	0 to +85 deg.	0 to +85 deg.	0 to +85 deg.	-85 to +85 deg.
Optical Zoom		6x	2.4x	3.6x	3.6x	3.3x
Digital Zoom		4x	4x	4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	Yes (Type2)	Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14	14	14
Audio	In (Line)	Yes	Yes	Yes	Yes	Yes
	In (Built-in MIC)	—	—	—	—	—
	Out	Yes	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	—	Yes	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC x 2)	Yes (SDXC x 2)	Yes (SDXC x 2)	Yes (SDXC)
	Password & Alter Detection	—	Yes (V1.52)	Yes (V1.52)	Yes (V1.52)	Yes
	Audio REC	Yes	Yes	Yes	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*4)	Yes (3) (*4)	Yes (3) (*4)	Yes (3) (*4)
Monitor Out		Yes (RCA)	Yes (mini jack)	Yes (mini jack)	Yes (mini jack)	Yes (mini jack)
Vandal Resistant		20J, IK10	50J, IK10	50J, IK10	50J, IK10	50J, IK10
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X
Temperature		-49°F to +122°F	-49°F to +122°F	-49°F to +122°F	-49°F to +122°F	-49°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	Yes	Yes	Yes	Yes
Other Functions		Onvif S/G, Smart-DoF, Built-in heater, Rain wash coating, Built-in IR LED	Onvif S/G, Smart-DoF, Built-in heater, Built-in IR LED	Onvif S/G, Smart-DoF, Built-in heater, Built-in IR LED	Onvif S/G, Smart-DoF, Built-in heater, Built-in IR LED	Onvif S/G, Built-in heater
Mounting Options		See pages 62	See pages 61, 62	See pages 61, 62	See pages 61, 62	See pages 61, 62

(*1): w/Super resolution   (*2): Only for SD REC   (*3): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out, Day/Night Out) (x1 for each)   (*4): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

Left table

CAMERA TYPE		WV-SFV311A HD720P	WV-SFV310A HD720P	WV-SFV130/WV-SFV130M (*5) HD1080P	WV-SFV110/WV-SFV110M(*5) HD720P
Appearance					
Sensor		1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080 (*1) / 1280 x 720	1920 x 1080 (*1) / 1280 x 720	1920 x 1080	1280 x 720
	4 : 3	1280 x 960	1280 x 960	2048x1536	1280 x 960
Max. FPS @Max. Resolution	H.264	60fps (720p)	60fps (720p)	30fps (3MP)	30fps (1.3MP)
	JPEG	30fps (1.3 MP)	30fps (1.3 MP)	30fps (3MP)	30fps (1.3MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Super Dynamic	Super Dynamic
Day/Night		Yes (ICR)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		ABF	Focus Assist	—	—
Min. Illumination	Color	0.01 lx @F1.6	0.01 lx @F1.6	0.1 lx @F2.3	0.04 lx @F2.3
	Color (Sens up)	0.0007 lx (16x)	0.0007 lx (16x)	0.007 lx (16x)	0.003 lx (16x)
	B/W	0.003 lx @F1.6	0.008 lx @F1.6	0.08 lx @F2.3	0.03 lx @F2.3
	B/W (Sens up)	0.0002 lx (16x)	0.0005 lx (16x)	0.005 lx (16x)	0.002 lx (16x)
Lens		f= 2.8 to 10 mm, F1.6	f= 2.8 to 10 mm, F1.6	f= 2.8mm, F2.3	f= 2.8mm, F2.3
Angular field of view	16 : 9	H: 28 to 99 deg. V: 16 to 54 deg.	H: 28 to 99 deg. V: 16 to 54 deg.	H: 108 deg. V: 60 deg.	H: 100 deg. V: 55 deg.
	4 : 3	H: 28 to 99 deg. V: 21 to 72 deg.	H: 28 to 99 deg. V: 21 to 72 deg.	H: 89 deg. V: 66 deg.	H: 100 deg. V: 73 deg.
Adjusting Angle	Pan	-180 to +180 deg.	-180 to +180 deg.	-20 to +20 deg.	-20 to +20 deg.
	Tilt	-85 to +85 deg.	-85 to +85 deg.	-20 to +90 deg.	-20 to +90 deg.
Optical Zoom		3.6x	3.6x	—	—
Digital Zoom		4x	4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes	Yes	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14	14
Audio	In (Line)	Yes	—	—	—
	In (Built-in MIC)	—	—	Yes	Yes
	Out	Yes	—	—	—
	Codec	G.711 / G.726 / AAC	—	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	—	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	Yes	Yes	Yes	Yes
	Audio REC	Yes	—	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*4)	—	—
Monitor Out		Yes (mini jack)	Yes (mini jack)	—	—
Vandal Resistant		50J, IK10	50J, IK10	IK10	IK10
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X
Temperature		-49°F to +122°F (in operation)	-49°F to +122°F (in operation)	-49°F to +140°F	-49°F to +140°F
Power Source		12 V DC / PoE	12 V DC / PoE	PoE	PoE
Dehumidification device		Yes	Yes	—	—
Other Functions		Onvif S, Built-in heater	Onvif S, Built-in heater	Onvif S, Railway Application (EN50155-T3, EN50121, EN45545, EN50498 and ECE-R10 (SFV130M))	Onvif S, Railway Application (EN50155-T3, EN50121, EN45545, EN50498 and ECE-R10 (SFV110M))
Mounting Options		See pages 61, 62	See pages 61, 62		

(*1): with Simple Full-HD mode (tentative name) (*2): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)   (*3): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)
(*4): Alarm In1 (Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)   (*5): SFV110/130: 10BASE-T/100BASE-TX, RJ45 connector, SFV110M/130M: 10BASE-T/100BASE-TX, M12 connector

Right table

CAMERA TYPE		WV-SBV131M (*4) HD1080P	WV-SBV111M (*4) HD720P	WV-SW115 HD720P	WV-SFR631L HD1080P	WV-SFR611L HD720P
Appearance						
Sensor		1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	2	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6	6 (Variable)	6 (Variable)
	Smart Coding	—	—	—	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1280 x 720	1280 x 720	1920 x 1080	1280 x 720
	4 : 3	2048 x 1536 (*2)	1280 x 960	1280 x 960	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.264	30fps (1080p)	30fps (720p)	30fps (1.3 MP)	60fps (1080p)	60fps (720p)
	JPEG	30fps (3 MP)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (3 MP) (*1)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		WDR	WDR	Super-D	Enhanced SD	Enhanced SD
Day/Night		Yes (Electrical)	Yes (Electrical)	Yes (Electrical)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		—	—	—	ABF	ABF
Min. Illumination	Color	0.1 lx @F2.2	0.04 lx @F2.2	0.8 lx @F2.2	0.04 lx @F1.3	0.01 lx @F1.3
	Color (Sens up)	0.007 lx (16x)	0.003 lx (16x)	0.05 lx (16x)	0.003 lx (16x)	0.0007 lx (16x)
	B/W	0.06 lx @F2.2	0.03 lx @F2.2	0.6 lx @F2.2	0.0 lx @F1.3(w/IR)	0.0 lx @F1.3(w/IR)
	B/W (Sens up)	0.004 lx (16x)	0.002 lx (16x)	0.04 lx (16x)	—	—
Lens		f= 1.95 mm, F2.2	f= 1.95 mm, F2.2	f= 1.95 mm, F2.2	f= 2.8 to 10 mm, F1.3 Motorized	f= 2.8 to 10 mm, F1.3 Motorized
Angular field of view	16 : 9	H: 109 deg. V: 73 deg.	H: 104 deg. V: 69 deg.	H: 104 deg. V: 68 deg.	H: 28.8 to 102.9 deg. V: 16.0 to 56.2 deg.	H: 26.4 to 94.0 deg. V: 14.7 to 51.8 deg.
	4 : 3	H: 97 deg. V: 79 deg.	H: 104 deg. V: 85 deg.	H: 104 deg. V: 85 deg.	H: 23.8 to 84.6 deg. V: 17.8 to 62.6 deg.	H: 26.4 to 94.0 deg. V: 19.8 to 69.5 deg.
Adjusting Angle	Pan	-170 to +170 deg.	-170 to +170 deg.	-30 to +30 deg.	-180 to +180 deg.	-180 to +180 deg.
	Tilt	-90 to +90 deg.	-90 to +90 deg.	-30 to +30 deg.	0 to +85 deg.	0 to +85 deg.
Optical Zoom		—	—	—	3.6x	3.6x
Digital Zoom		3x	3x	4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	—	—	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (1-area)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14	14	14
Audio	In (Line)	Yes	Yes	—	Yes	Yes
	In (Built-in MIC)	—	—	—	—	—
	Out	Yes	Yes	—	Yes	Yes
	Codec	G.726(ADPCM)	G.726(ADPCM)	—	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	—	—	—	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDHC)	Yes (SDXC x 2)	Yes (SDXC x 2)
	Password & Alter Detection	—	—	—	Yes (V1.52)	Yes (V1.52)
	Audio REC	—	—	—	Yes	Yes
External I/O		—	—	—	Yes (3) (*2)	Yes (3) (*2)
Monitor Out		—	—	—	Yes (mini jack)	Yes (mini jack)
Vandal Resistant		IK10	IK10	20J, IK10	20J, IK10	20J, IK10
Water and Dust Resistance		IP6K9K / IP66 / NEMA 4X	IP6K9K / IP66 / NEMA 4X	IP66 / NEMA 4X	—	—
Temperature		-49°F to +140°F	-49°F to +140°F	-22°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		PoE	PoE	PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—	—	—	—
Other Functions		Onvif S/G, MIL-STD-810G EN50155-T3, EN50121, EN45545, EN50498, ECE-R10	Onvif S/G, MIL-STD-810G EN50155-T3, EN50121, EN45545, EN50498, ECE-R10	Onvif S, EN50155, EN50121	Onvif S/G, Smart-DoF, Built-in IR LED	Onvif S/G, Smart-DoF, Built-in IR LED
Mounting Options					See pages 60, 61	See pages 60, 61

(*1): w/Super resolution   (*2): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)   (*3): Alarm In1, Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)
(*4): SBV111M/131M: 10BASE-T/100BASE-TX, M12 connector

Panasonic

Left table

CAMERA TYPE		FIXED DOME			
Appearance		WV-SFR531 HD1080P	WV-SFR311A HD720P	WV-SFR310A HD720P	WV-SFN631L HD1080P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080 (*1) / 1280 x 720	1920 x 1080 (*1) / 1280 x 720	1920 x 1080
	4 : 3	2048 x 1536 (*1)	1280 x 960	1280 x 960	2048 x 1536 (*2)
Max. FPS @Max. Resolution	H.264	60fps (1080p)	60fps (720p)	60fps (720p)	60fps (1080p)
	JPEG	30fps (3 MP) (*1)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (3 MP) (*2)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (Electrical)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	Focus Assist	ABF
Min. Illumination	Color	0.07 lx @F1.6	0.01 lx @F1.6	0.01 lx @F1.6	0.04 lx @F1.3
	Color (Sens up)	0.005 lx (16x)	0.0007 lx (16x)	0.0007 lx (16x)	0.003 lx (16x)
	B/W	0.01 lx @F1.6	0.003 lx @F1.6	0.008 lx @F1.6	0.0 lx @F1.3 (w/IR)
	B/W (Sens up)	0.0007 lx (16x)	0.0002 lx (16x)	0.0005 lx (16x)	—
Lens		f=2.8 to 9.5 mm, F1.6	f= 2.8 to 10 mm, F1.6	f= 2.8 to 10 mm, F1.6	f= 2.8 to 10 mm, F1.3 Motorized
Angular field of view	16 : 9	H: 31 to 109 deg. V: 18 to 59 deg.	H: 28 to 99 deg. V: 16 to 54 deg.	H: 28 to 99 deg. V: 16 to 54 deg.	H: 29.3 to 104.1 deg. V: 16.2 to 56.8 deg.
	4 : 3	H: 26 to 89 deg. V: 20 to 66 deg.	H: 28 to 99 deg. V: 21 to 72 deg.	H: 28 to 99 deg. V: 21 to 72 deg.	H: 24.0 to 85.5 deg. V: 18.0 to 63.3 deg.
Adjusting Angle	Pan	+120(right) to -240(left) deg.	+120 to -240 deg.	+120 to -240 deg.	-180 to +180 deg.
	Tilt	-85 to +85 deg.	-85 to +85 deg.	-85 to +85 deg.	0 to +85 deg.
Optical Zoom		3.3x	3.6x	3.6x	3.6x
Digital Zoom		4x	4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes (Type2)	Yes	Yes	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14	14
Audio	In (Line)	Yes	Yes	—	Yes
	In (Built-in MIC)	—	—	—	—
	Out	Yes	Yes	—	Yes
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC	—	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes	—	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC x 2)
	Password & Alter Detection	Yes	Yes	Yes	Yes (V1.52)
	Audio REC	Yes	Yes	—	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*4)	Yes (3) (*5)
Monitor Out		Yes (mini jack)	Yes (mini jack)	Yes (mini jack)	Yes (mini jack)
Vandal Resistant		20J, IK10	20J, IK10	20J, IK10	—
Water and Dust Resistance		—	—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—	—	—
Other Functions		Onvif S/G	Onvif S	Onvif S	Onvif S/G, Smart-DoF, Built-in IR LED
Mounting Options		See pages 60, 61	See pages 60, 61	See pages 60, 61	See pages 60, 61

(*1): with Simple Full-HD mode (tentative name)   (*2): w/Super resolution   (*3): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)
(*4): Alarm In1 (Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)   (*5): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)   (*6): Alarm In1, Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

Right table

CAMERA TYPE		FIXED DOME		
Appearance		WV-SFN611L HD1080P	WV-SFN531 HD720P	WV-SFN311A HD720P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes	Yes
Max. Resolution	16 : 9	1280 x 720	1920 x 1080	1920 x 1080(*1) / 1280 x 720
	4 : 3	1280 x 960	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.264	60fps (720p)	60fps (1080p)	60fps (720p)
	JPEG	30fps (1.3 MP)	30fps (3 MP) (*1)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF
Min. Illumination	Color	0.01 lx @F1.3	0.07 lx @F1.6	0.01 lx @F1.6
	Color (Sens up)	0.0007 lx (16x)	0.005 lx (16x)	0.0007 lx (16x)
	B/W	0.0 lx @F1.3 (w/IR)	0.01 lx @F1.6	0.003 lx @F1.6
	B/W (Sens up)	—	—	0.0002 lx (16x)
Lens		f= 2.8 to 10 mm, F1.3 Motorized	f=2.8 to 9.5 mm, F1.6	f= 2.8 to 10 mm, F1.6
Angular field of view	16 : 9	H: 26.6 to 95.1 deg. V: 14.9 to 52.3 deg.	H: 32 to 110 deg. V: 18 to 60 deg.	H: 28 to 100 deg. V: 16 to 54 deg.
	4 : 3	H: 26.7 to 95.1 deg. V: 20.0 to 70.2 deg.	H: 27 to 91 deg. V: 20.0 to 66 deg.	H: 28 to 100 deg. V: 21 to 73 deg.
Adjusting Angle	Pan	-180 to +180 deg.	+120(right) to -240(left) deg.	+120 to -240 deg.
	Tilt	0 to +85 deg.	-85 to +85 deg.	-85 to +85 deg.
Optical Zoom		3.6x	3.3x	3.6x
Digital Zoom		4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes (Type2)	Yes (Type2)	Yes
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14
Audio	In (Line)	Yes	Yes	Yes
	In (Built-in MIC)	—	—	—
	Out	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC x 2)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	Yes (V1.52)	Yes	Yes
	Audio REC	Yes	Yes	Yes
External I/O		Yes (3) (*6)	Yes (3) (*2)	Yes (3) (*2)
Monitor Out		Yes (mini jack)	Yes (mini jack)	Yes (mini jack)
Vandal Resistant		—	—	—
Water and Dust Resistance		—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—	—
Other Functions		Onvif S/G, Smart-DoF, Built-in IR LED	Onvif S/G	Onvif S
Mounting Options		See pages 60, 61	See pages 60, 61	See pages 60, 61

(*1): with Simple Full-HD mode (tentative name)   (*2): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)
(*3): Alarm In1 (Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)

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FIXED DOME

CAMERA TYPE		FIXED DOME		
Appearance		WV-SFN310A HD720P	WV-SFN130 HD1080P	WV-SFN110 HD720P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080(*1) / 1280 x 720	1920 x 1080	1280 x 720
	4 : 3	1280 x 960	2048 x 1536	1280 x 960
Max. FPS @Max. Resolution	H.264	60fps (720p)	30fps (3MP)	30fps (1.3MP)
	JPEG	30fps (1.3 MP)	30fps (3MP)	30fps (1.3MP)
Super Dynamic / WDR / BLC		Enhanced SD	Super Dynamic	Super Dynamic
Day/Night		Yes (Electrical)	Yes (Electrical)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		Focus Assist	—	—
Min. Illumination	Color	0.01 lx @F1.6	0.1 lx @F2.3	0.04 lx @F2.3
	Color (Sens up)	0.0007 lx (16x)	0.007 lx (16x)	0.003 lx (16x)
	B/W	0.008 lx @F1.6	0.08 lx @F2.3	0.03 lx @F2.3
	B/W (Sens up)	0.0005 lx (16x)	0.005 lx (16x)	0.002 lx (16x)
Lens		f= 2.8 to 10 mm, F1.6	f= 2.8mm, F2.3	f= 2.8mm, F2.3
Angular field of view	16 : 9	H: 28 to 100 deg. V: 16 to 54 deg.	H: 108 deg. V: 60 deg.	H: 100 deg. V: 55 deg.
	4 : 3	H: 28 to 100 deg. V: 21 to 73 deg.	H: 89 deg. V: 66 deg.	H: 100 deg. V: 73 deg.
Adjusting Angle	Pan	+120 to -240 deg.	-20 to +20 deg.	-20 to +20 deg.
	Tilt	-85 to +85 deg.	-20 to +90 deg.	-20 to +90 deg.
Optical Zoom		3.6x	—	—
Digital Zoom		4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14
Audio	In (Line)	—	—	—
	In (Built-in MIC)	Yes	Yes	Yes
	Out	—	—	—
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	Yes	Yes	Yes
	Audio REC	Yes	Yes	Yes
External I/O		Yes (3) (*3)	—	—
Monitor Out		Yes (mini jack)	—	—
Vandal Resistant		—	—	—
Water and Dust Resistance		—	—	—
Temperature		+14°F to +122°F	+32°F to +104°F	+32°F to +104°F
Power Source		12 V DC / PoE	PoE	PoE
Dehumidification device		—	—	—
Other Functions		Onvif S	Onvif S/G	Onvif S
Mounting Options		See pages 60, 61		

(*1): with Simple Full-HD mode (tentative name)   (*2): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)
(*3): Alarm In1 (Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)

360-DEGREE DOME

CAMERA TYPE		360-DEGREE DOME				
Appearance		WV-SFV481 4K Engine	WV-SW458/SW458MA(*1) HD1080P	WV-SFN480 4K Engine	WV-SF448 HD1080P	WV-SF438 HD1080P
Sensor		1/2 MOS	1/3 MOS	1/2 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	2	2	2	2	2
	JPEG multi stream	2	6	2	6	6
	Smart Coding	Yes (GOP Only)	—	Yes (GOP Only)	—	—
Max. Resolution	16 : 9	2560 x 1440	1920 x 1080	2560 x 1440	1920 x 1080	1920 x 1080
	4 : 3	2560 x 1920 2992 x 2992 (1:1)	H.264: 1280 x 960 JPEG : 2048 x 1536	2560 x 1920 2992 x 2992 (1:1)	H.264: 1280 x 960 JPEG : 2048 x 1536	H.264: 1280 x 960 JPEG : 2048 x 1536
Max. FPS @Max. Resolution	H.264	30fps (4 M)	30fps (1080p)	30fps (4 M)	30fps (1080p)	30fps (1080p)
	JPEG	30fps (4 M)	15fps (3 MP) / 30fps (1080p)	30fps (4 M)	15fps (3 MP) / 30fps (1080p)	15fps (3 MP) / 30fps (1080p)
Super Dynamic / WDR / BLC		WDR	Super-D	WDR	Super-D	Super-D
Day/Night		Yes (ICR)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		ABF	—	ABF	—	—
Min. Illumination	Color	0.3 lx @F1.9	1.5 lx@F2.4	0.3 lx @F1.9	1.5 lx @F2.4	1.5 lx @F2.4
	Color (Sens up)	0.02 lx (16x)	0.1 lx (16x)	0.02 lx (16x)	0.1 lx (16x)	0.1 lx (16x)
	B/W	0.04 lx @F1.9	1.2 lx @F2.4	0.2 lx @F1.9	1.2 lx @F2.4	1.2 lx @F2.4
	B/W (Sens up)	0.003 lx (16x)	0.08 lx (16x)	0.01 lx (16x)	0.08 lx (16x)	0.08 lx (16x)
Lens		f= 1.38 mm, F1.9	f= 0.837 mm, F2.4	f= 1.38 mm, F1.9	f= 0.837 mm, F2.4	f= 0.837 mm, F2.4
Angular field of view	1 : 1	H: 180 deg. V: 180 deg.	H: 182 deg. V: 176 deg.	H: 180 deg. V: 180 deg.	H: 182 deg. V: 176 deg.	H: 188 deg. V: 181 deg.
Adjusting Angle	Pan	±45 deg.	—	±45 deg.	—	—
	Tilt	±45 deg.	—	±45 deg.	—	—
Optical Zoom		—	—	—	—	—
Digital Zoom		4x	4x	4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes (Type3)	—	Yes (Type3)	—	—
VIQS		Yes (8-areas)	Yes (2-areas)	Yes (8-areas)	Yes (2-areas)	Yes (2-areas)
Max. Connection		14	14	14	14	14
Audio	In (Line)	Yes	Yes	Yes	Yes	Yes
	In (Built-in MIC)	—	—	Yes	Yes	Yes
	Out	Yes	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC	G.711 / G.726	G.711 / G.726 / AAC	G.711 / G.726	G.711 / G.726
	Audio Detection Alarm	—	—	—	—	—
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	—	—	—	—	—
	Audio REC	Yes (ACC)	—	Yes (ACC)	—	—
External I/O		Yes (3) (*2)	Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*4)	Yes (3) (*3)
Monitor Out		Yes (RCA)		Yes(RCA)	—	—
Vandal Resistant		50J, IK10	50J, IK10	—	20J, IK10	—
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	—	—	—
Temperature		-40°F to +122°F	-40°F to +122°F	Ceiling / Wall /Mount bracket: +14°F to +122°F Desktop / Tripod: +14°F to +104°F	+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	Yes	—	—	—
Other Functions		Onvif S/G, 360° monitoring, EN50155-T3, EN50121, DIN5510	Onvif S, 360° monitoring, EN50155-T3, EN50121, DIN5510, ECE-R10(WV-SW458MA)	Onvif S/G, 360° monitoring	Onvif S, 360° monitoring, Mechanical shutter	Onvif S, 360° monitoring
Mounting Options		See pages 61, 62	See pages 61, 62			

(*1): SW458: 10BASE-T/100BASE-TX, RJ45 connector, SW458MA: 10BASE-T/100BASE-TX, M12 connector   (*2): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)
(*3): Alarm In1, Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)   (*4): Alarm In1 (Privacy action in), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

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CAMERA TYPE — H.265 BOX

		WV-S1531LTN HD1080P	WV-S1531LN HD1080P	WV-S1511LN HD720P	WV-S1131 HD1080P	WV-S1111 HD720P
Appearance		*NEW* i-PRO EXTREME	*NEW* i-PRO EXTREME	*NEW* i-PRO EXTREME	*NEW* i-PRO EXTREME (Lens not included)	*NEW* i-PRO EXTREME (Lens not included)
Sensor		1/3 MOS	1/3 MOS	1/3 MOS	1/2.8 MOS	1/2.8 MOS
Codec and Transmission	Video Codec	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG
	H.265 / H.264 multi stream	4	4	4	4	4
	JPEG multi stream	3 (Variable)	3 (Variable)	3 (Variable)	3 (Variable)	3 (Variable)
	H.265 / H.264: VBR / AVBR (Advanced VBR)	VBR	VBR	VBR	VBR	VBR
	Smart Coding	Yes	Yes	Yes	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080	1280 x 720	1920 x 1080	1280 x 720
	4 : 3	2048 x 1536 (*1)	2048 x 1536 (*1)	1280 x 960	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.265 / H.264	60fps (1080p)	60fps (1080p)	60fps (720p)	60fps (1080p)	60fps (720p)
	JPEG	30fps (3 MP)	30fps (3 MP)	30fps (1.3 MP)	30fps (3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF	ABF	ABF
Min. Illumination	Color	0.015 lx @F1.7	0.012 lx @F1.6	0.008 lx @F1.6	0.01 lx @F1.4	0.007 lx @F1.4
	Color (Sens up)	0.001 lx (16x)	0.0008 lx (16x)	0.0005 lx (16x)	0.0007 lx (16x)	0.0005 lx (16x)
	B/W	0.0 lx @F1.7 (w/IR)	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6 (w/IR)	0.004 lx @F1.4	0.003 lx @F1.4
	B/W (Sens up)	—	—	—	0.0003 lx (16x)	0.0002 lx (16x)
Lens		f = 9 to 21 mm, F1.7 Motorized	f = 2.8 to 10 mm, F1.6 Motorized	f = 2.8 to 10 mm, F1.6	CS Mount	CS Mount
Angular field of view	16 : 9	H : 14 to 34 deg. V : 8 to 19 deg.	H : 31 to 112 deg. V : 17 to 60 deg.	H : 31 to 112 deg. V : 17 to 60 deg.	—	—
	4 : 3	H : 12 to 28 deg. V : 9 to 21 deg.	H : 26 to 91 deg. V : 19 to 67 deg.	H : 26 to 91 deg. V : 19 to 67 deg.		
Adjusting Angle	Pan	-100 to +100 deg.	-100 to +100 deg.	-100 to +100 deg.	—	—
	Tilt	-100 to +100 deg.	-100 to +100 deg.	-100 to +100 deg.	—	—
Optical Zoom		2.3x	3.6x	3.6x	—	—
Digital Zoom		4x	4x	4x	4x	4x
Image Stabilizer		Yes	Yes	Yes	Yes	Yes
Corridor Mode		Yes (Type2)	Yes	Yes	Yes	Yes
iA (Intelligent Auto)		Yes	Yes	Yes	Yes	Yes
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/optional extension software)		Yes (Type2)	Yes (Type2)	Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		—	—	—	—	—
Max. Connection		14	14	14	14	14
Audio	In (Line) / Out	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes
	In (Built-in MIC)	—	—	—	—	—
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Alter Detection	Yes	Yes	Yes	Yes	Yes
	Audio REC	Yes	Yes	Yes	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)	Yes (3) (*3)
Monitor Out		Yes (RCA)	Yes (RCA)	Yes (RCA)	Yes (RCA)	Yes (RCA)
Vandal Resistant		IK10	IK10	IK10	—	—
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	—	—
Temperature		-40°F to +140°F (*4)	-40°F to +140°F (*4)	-40°F to +140°F (*4)	+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	Yes	Yes		
Other Functions		Onvif S/G, Easy Setup Packaging, Built-in heater, ClearSight coating, Built-in IR LED	Onvif S/G, Easy Setup Packaging, Built-in heater, ClearSight coating, Built-in IR LED	Onvif S/G, Easy Setup Packaging, Built-in heater, ClearSight coating, Built-in IR LED	Onvif S/G, Easy Setup Packaging, RS485 serial part (WV-S1132)	Onvif S/G, Easy Setup Packaging, RS485 serial part (WV-S1132)
Mounting Options		See page 67	See page 67	See page 67	See page 67	See page 67

(*1) : w/Super resolution   (*2) : Only for SD REC   (*3) : Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)   (*4) : When the IR LED is ON, the maximum temperature is 50 deg.

CAMERA TYPE — BOX

		WV-SPV781L 4K Engine	WV-SPW631LT HD1080P	WV-SPW631L HD1080P	WV-SPW611L HD720P
Appearance					
Sensor		1/1.7 MOS	1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4	4
	JPEG multi stream	2	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes (GOP Only)	Yes	Yes	Yes
Max. Resolution	16 : 9	3840 x 2160	1920 x 1080	1920 x 1080	1280 x 720
	4 : 3	4000 x 3000	2048 x 1536 (*1)	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.264	30fps (4K)	60fps (1080p)	60fps (1080p)	60fps (720p)
	JPEG	15fps (12 MP)	30fps (3 MP)	30fps (3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		WDR	Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF	ABF
Min. Illumination	Color	0.3 lx @F1.6	0.06 lx @F1.6	0.04 lx @F1.3	0.01 lx @F1.3
	Color (Sens up)	0.02 lx (16x)	0.004 lx (16x)	0.003 lx (16x)	0.0007 lx (16x)
	B/W	0.0 lx @F1.6 (w/IR)	0.0 lx @F1.6(w/IR)	0.0 lx @F1.3(w/IR)	0.0 lx @F1.3(w/IR)
	B/W (Sens up)	—	—	—	—
Lens		f=4.2 to 25.2 mm, F1.6 Motorized	f= 9 to 22 mm, F1.6 Motorized	f= 2.8 to 10 mm, F1.3 Motorized	f= 2.8 to 10 mm, F1.3 Motorized
Angular field of view	16 : 9	H: 17 to 97 deg. V: 9.4 to 55 deg.	H: 13.8 to 33.5 deg. V: 7.7 to 18.1 deg.	H: 30.9 to 105.4 deg. V: 17.4 to 57.3 deg.	H: 28.4 to 96.2 deg. V: 16.1 to 52.8 deg.
	4 : 3	H: 18 to 101 deg. V: 13 to 76 deg.	H: 11.5 to 27.4 deg. V: 8.6 to 20.1 deg.	H: 25.8 to 86.4 deg. V: 19.3 to 63.9 deg.	H: 28.4 to 96.2 deg. V: 21.4 to 71.0 deg.
Adjusting Angle	Pan	—	—	—	—
	Tilt	—	—	—	—
Optical Zoom		6x	2.4x	3.6x	3.6x
Digital Zoom		4x	4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14	14
Audio	In (Line)	Yes	Yes	Yes	Yes
	In (Built-in MIC)	—	—	—	—
	Out	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC (*2)	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	—	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC x 2)	Yes (SDXC x 2)	Yes (SDXC x 2)
	Password & Alter Detection	—	Yes	Yes	Yes
	Audio REC	Yes	Yes (AAC)	Yes (AAC)	Yes (AAC)
External I/O		Yes (3) (*3)	Yes (3) (*4)	Yes (3) (*4)	Yes (3) (*4)
Monitor Out		Yes (RCA)	Yes (RCA)	Yes (RCA)	Yes (RCA)
Vandal Resistant		20J, IK10	—	—	—
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X
Temperature		-49°F to +122°F	-40°F to +122°F	-40°F to +122°F	-40°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	Yes	Yes	Yes
Other Functions		Onvif S/G, Built-in heater, Rain wash coating, Built-in IR LED	Onvif S/G, Built-in heater, Built-in IR LED	Onvif S/G, Built-in heater, Built-in IR LED	Onvif S/G, Built-in heater, Built-in IR LED
Mounting Options		See page 67	See page 67	See page 67	See page 67

(*1): w/Super resolution   (*2): Only for SD REC   (*3): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out, Day/Night Out) (x1 for each)   (*4): Alarm In1 (Day/Night In), Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

Panasonic

Left page (42)

CAMERA TYPE		BOX		
Appearance		**WV-SPW611** HD720P	**WV-SPW531AL** HD1080P	**WV-SPW311AL** HD720P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes	Yes
Max. Resolution	16 : 9	1280 x 720	1920 x 1080	1920 x 1080 (*1) / 1280 x 720
	4 : 3	1280 x 960	2048 x 1536	1920 x 1080 (*1)
Max. FPS @Max. Resolution	H.264	60fps (720p)	60fps (1080p)	60fps (720p)
	JPEG	30fps (1.3 MP)	30fps (3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	ABF
Min. Illumination	Color	0.01 lx @F1.3	0.07 lx @F1.6	0.02 lx @F1.6
	Color (Sens up)	0.0007 lx (16x)	0.005 lx (16x)	0.005 lx (16x)
	B/W	0.003 lx @F1.3	0.0 lx @F1.6(w/IR)	0.0 lx @F1.6(w/IR)
	B/W (Sens up)	0.0002 lx (16x)	—	—
Lens		f= 2.8 to 10 mm, F1.3 Motorized	f= 2.8 to 10 mm, F1.6	f= 2.8 to 10 mm, F1.6
Angular field of view	16 : 9	H: 28.4 to 96.2 deg. V: 16.1 to 52.8 deg.	H: 31 to 112 deg. V: 17 to 60 deg.	H: 28 to 102 deg. V: 16 to 55 deg.
	4 : 3	H: 28.4 to 96.2 deg. V: 21.4 to 71.0 deg.	H: 26 to 91 deg. V: 19 to 67 deg.	H: 28 to 102 deg. V: 21 to 74 deg.
Adjusting Angle	Pan	—	-180 to +180 deg.	-180 to +180 deg.
	Tilt	—	0 to +90 deg.	0 to +90 deg.
Optical Zoom		3.6x	3.6x	3.6x
Digital Zoom		4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14
Audio	In (Line)	Yes	Yes	Yes
	In (Built-in MIC)	—	—	—
	Out	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC x 2)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	Yes	Yes	Yes
	Audio REC	Yes (AAC)	Yes (AAC)	Yes (AAC)
External I/O		Yes (3) (*2)	Yes (3) (*2)	Yes (3) (*2)
Monitor Out		Yes (RCA)	Yes (RCA)	Yes (RCA)
Vandal Resistant		—	—	—
Water and Dust Resistance		IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X
Temperature		-40°F to +122°F	-40°F to +122°F	-40°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		Yes	Yes	Yes
Other Functions		Onvif S/G, Built-in heater	Onvif S/G, Built-in IR LED	Onvif S/G, Built-in IR LED
Mounting Options		See page 67	See page 67	See page 67

(*1): with Simple Full-HD mode (tentative name)   (*2): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each

Right page (43)

CAMERA TYPE		BOX	
Appearance		**WV-SPN631** HD1080P Lens not included	**WV-SPN611** HD720P Lens not included
Sensor		1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1280 x 720
	4 : 3	2048 x 1536 (*1)	1280 x 960
Max. FPS @Max. Resolution	H.264	60fps (1080p)	60fps (720p)
	JPEG	30fps (3 MP) (*1)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF
Min. Illumination	Color	0.04 lx @F1.4	0.01 lx @F1.4
	Color (Sens up)	0.003 lx (16x)	0.0007 lx (16x)
	B/W	0.01 lx @F1.4	0.003 lx @F1.4
	B/W (Sens up)	0.0007 lx (16x)	0.0002 lx (16x)
Lens		CS Mount	CS Mount
Angular field of view	16 : 9	—	—
	4 : 3	—	—
Adjusting Angle	Pan	—	—
	Tilt	—	—
Optical Zoom		—	—
Digital Zoom		4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14
Audio	In (Line)	Yes	Yes
	In (Built-in MIC)	—	—
	Out	Yes	Yes
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes
SD memory Card	Slot	Yes (SDXC x 2)	Yes (SDXC x 2)
	Password & Alter Detection	Yes	Yes
	Audio REC	Yes (AAC)	Yes (AAC)
External I/O		Yes (3) (*2)	Yes (3) (*2)
Monitor Out		Yes (RCA)	Yes (RCA)
Vandal Resistant		—	—
Water and Dust Resistance		—	—
Temperature		+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—
Other Functions		Onvif S/G, Optional Extension Unit	Onvif S/G, Optional Extension Unit
Mounting Options		See page 67	See page 67

(*1): with Simple Full-HD mode (tentative name)   (*2): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each

BOX / CYLINDER

CAMERA TYPE		BOX / CYLINDER		
Appearance		WV-SPN531A HD1080P (Lens not included)	WV-SPN311A HD720P (Lens not included)	WV-SPN310A HD720P (Lens not included)
Sensor		1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	4	4	4
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)
	Smart Coding	Yes	Yes	Yes
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080 (*1) / 1280 x 720	1920 x 1080 (*1) / 1280 x 720
	4 : 3	2048 x 1536	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.264	60fps (1080p)	60fps (720p)	60fps (720p)
	JPEG	30fps (3 MP)	30fps (1.3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD
Day/Night		Yes (ICR)	Yes (ICR)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		ABF	ABF	Focus Assist
Min. Illumination	Color	0.04 lx @F1.4	0.01 lx @F1.4	0.01 lx @F1.4
	Color (Sens up)	0.003 lx (16x)	0.0007 lx (16x)	0.0007 lx (16x)
	B/W	0.01 lx @F1.4	0.003 lx @F1.4	0.008 lx @F1.4
	B/W (Sens up)	0.0007 lx (16x)	0.0002 lx (16x)	0.0005 lx (16x)
Lens		CS Mount	CS Mount	CS Mount
Angular field of view	16 : 9	—	—	—
	4 : 3	—	—	—
Adjusting Angle	Pan	—	—	—
	Tilt	—	—	—
Optical Zoom		—	—	—
Digital Zoom		4x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		Yes (Type2)	Yes (Type2)	Yes (Type2)
VIQS		Yes (8-areas)	Yes (8-areas)	Yes (8-areas)
Max. Connection		14	14	14
Audio	In (Line)	Yes	Yes	—
	In (Built-in MIC)	—	—	Yes
	Out	Yes	Yes	—
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	Yes (SDXC)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	Yes	Yes	Yes
	Audio REC	Yes (AAC)	Yes (AAC)	Yes (AAC)
External I/O		Yes (3) (*3)	Yes (3) (*2)	Yes (3) (*3)
Monitor Out		Yes (RCA)	Yes (RCA)	Yes (RCA)
Vandal Resistant		—	—	—
Water and Dust Resistance		—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		12 V DC / PoE	12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—	—
Other Functions		Onvif S/G	Onvif S/G	Onvif S/G
Mounting Options		See page 67	See page 67	See page 67

(*1): with Simple Full-HD mode (tentative name)   (*2): Alarm In1 (Day/Night In, Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)
(*3): Alarm In1 (Auto time adjustment), Alarm In 2 (Alarm Out), Alarm In 3 (AUX Out) (x1 for each)

PAN / TILT

CAMERA TYPE		PAN / TILT			
Appearance		WV-SW175 HD720P	WV-SW174W HD720P	WV-SW172 VGA	WV-ST165 HD720P
Sensor		1/4 MOS	1/4 MOS	1/4 MOS	1/4 MOS
Codec and Transmission	Video Codec	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	2	2	2	2
	JPEG multi stream	6	6	6	6
	Smart Coding	—	—	—	—
Max. Resolution	16 : 9	1280 x 720	1280 x 720	640 x 360	1280 x 720
	4 : 3	1280 x 960	1280 x 960	800 x 600	1280 x 960
Max. FPS @Max. Resolution	H.264	30fps (1.3 MP)	30fps (1.3 MP)	30fps (SVGA)	30fps (1.3 MP)
	JPEG	30fps (1.3 MP)	30fps (1.3 MP)	30fps (SVGA)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		BLC	BLC	BLC	BLC
Day/Night		Yes (Electrical)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)
ABF (Auto Back Focus) / Focus Assist		—	—	—	—
Min. Illumination	Color	0.6 lx @F2.2	0.6 lx @F2.2	0.6 lx @F2.2	0.6 lx @F2.2
	Color (Sens up)	0.038 lx (16x)	0.038 lx (16x)	0.038 lx (16x)	0.038 lx (16x)
	B/W	0.5 lx @F2.2	0.5 lx @F2.2	0.5 lx @F2.2	0.5 lx @F2.2
	B/W (Sens up)	0.03 lx (16x)	0.03 lx (16x)	0.03 lx (16x)	0.03 lx (16x)
Lens		f= 1.95 mm, F2.2	f= 1.95 mm, F2.2	f= 1.95 mm, F2.2	f= 1.95 mm, F2.2
Angular field of view	16 : 9	H: 85 deg. V: 53 deg.	H: 85 deg. V: 53 deg.	H: 85 deg. V: 53 deg.	H: 85 deg. V: 53 deg.
	4 : 3	H: 85 deg. V: 68 deg.	H: 85 deg. V: 68 deg.	H: 85 deg. V: 68 deg.	H: 85 deg. V: 68 deg.
Pan	Range	-47.5 to +47.5 deg.	-47.5 to +47.5 deg.	-47.5 to +47.5 deg.	-47.5 to +47.5 deg.
	Speed	80 deg/sec	80 deg/sec	80 deg/sec	80 deg/sec
Tilt	Range	-45 to +10 deg.	-45 to +10 deg.	-45 to +10 deg.	-45 to +10 deg.
	Speed	80 deg/sec	80 deg/sec	80 deg/sec	80 deg/sec
360 Pan-Flip		—	—	—	—
Number of Preset Positions		64	64	64	64
Patrol		—	—	—	—
Auto Tracking		—	—	—	—
Optical Zoom		—	—	—	—
Digital Zoom		16x	16x	16x	16x
VMD (Video Motion Detection)		Yes	Yes	Yes	Yes
i-VMD (Intelligent VMD) (w/extension software)		—	—	—	—
VIQS		—	—	—	—
Max. Connection		14	14	14	14
Audio	In (Line)	Yes	Yes	Yes	Yes
	In (Built-in MIC)	Yes	Yes	Yes	Yes
	Out	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726	G.711 / G.726	G.711 / G.726	G.711 / G.726
	Audio Detection Alarm	—	—	—	—
SD memory Card	Slot	Yes	—	Yes	Yes
	Password & Alter Detection	—	—	—	—
	Audio REC	—	—	—	—
External I/O		Yes (3) (*1)	Yes (3) (*1)	Yes (3) (*1)	Yes (3) (*1)
Monitor Out		Yes	Yes	Yes	Yes
Vandal Resistant		—	—	—	—
Water and Dust Resistance		IP55	IP55	IP55	—
Temperature		-4°F to +122°F	-4°F to +122°F	-4°F to +122°F	+32°F to +104°F
Power Source		12 V DC / PoE	12 V DC	12 V DC / PoE	12 V DC / PoE
Dehumidification device		—	—	—	—
Other Functions		Onvif S	Onvif S, Wireless (11 n/b/g)	Onvif S	Onvif S
Mounting Options					

(*1) : Alarm In1, Alarm In2 (Alarm Out), Alarm In3 (AUX Out) (x1 for each)

Panasonic

V-SERIES FIXED

CAMERA TYPE		WV-V1170 HD1080P	WV-V1330L1 HD1080P	WV-V1330LK HD1080P
Appearance		NEW	NEW	NEW
Sensor		1/1.7 MOS	1/2.8 MOS	1/2.8 MOS
Codec and Transmission	Video Codec	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG
	H.264 multi stream	3	3	3
	JPEG multi stream	1	3	3
	H.264 VBR / AVBR	VBR / CBR	VBR / CBR	VBR / CBR
Max. Resolution	16 : 9	3840 x 2160	1920 x 1080	1920 x 1080
	4 : 3	4000 x 3000	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.264	20 (12MP)/30fps	30/60fps (2MP)	30/60fps (2MP)
	JPEG	30fps (0.6MP)	30fps (2MP)	30fps (2MP)
Super Dynamic / WDR / BLC		DWDR	WDR	WDR
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		ABF	—	—
Min. Illumination	Color	0.2 lx @F1.4	0.2 lx @F1.4	0.2 lx @F2
	Color (Sens up)	—	—	—
	B/W	0.002 lx @F1.4	0 lx @F1.4 (IR on)	0 lx @F2 (IR on)
	B/W (Sens up)	—	—	—
Lens		—	f=2.7-12mm, F1.4	f=3.6 mm, F2
Angular field of view	16 : 9	—	H: 37 to 99 deg. V:21 to 52 deg.	H: 87deg. V: 48 deg.
	4 : 3	—	—	—
Adjusting Angle	Pan	—	(+120 to -240 deg.)	(+120 to -240 deg.)
	Tilt	—	(+85 to -30 deg.)	(+85 to -30 deg.)
Optical Zoom		—	4.4x	—
Digital Zoom		16x	4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	—	—
VIQS		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
Max. Connection		20	14	20
Audio	In (Line)	Yes	Yes	Yes
	In (Built-in MIC)	Yes	—	—
	Out	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC	—	—
	Audio Detection Alarm	Yes	Yes	Yes
SD Memory Card	Slot	Yes (MicroSD, SDXC)	Yes (MicroSD, SDXC)	—
	Password & Alter Detection	—	—	—
	Audio REC	Yes	Yes	Yes
External I/O		Yes (2)	Yes (1)	Yes (1)
Monitor Out		Yes	—	—
Vandal Resistant		—	—	—
Water and Dust Resistance		—	—	—
Temperature		-30 to +50 deg. C	-10 to +50 deg. C	-30 to +60 deg. C
Power Source		12 VDC / PoE	12 VDC / PoE	12 VDC / PoE
Dehumidification Device		—	—	—
Other Functions		ONVIF S/G	IP66, IR LED, ONVIF S/G	IP66, IR LED, ONVIF S/G
Mounting Options		See page 67		

*Bundled VI license not included with V series cameras

V-SERIES FIXED DOME

CAMERA TYPE		WV-V2530L1 HD1080P	WV-V2530LK HD1080P
Appearance		NEW	NEW
Sensor		1/2.8 MOS	1/2.8 MOS
Codec and Transmission	Video Codec	H.265 / H.264 / JPEG	H.265 / H.264 / JPEG
	H.264 multi stream	3	3
	JPEG multi stream	3	3
	H.264 VBR / AVBR	VBR / CBR	VBR / CBR
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080
	4 : 3	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.264	30/60fps (2MP)	30/60fps (2MP)
	JPEG	30fps (2MP)	30fps (2MP)
Super Dynamic / WDR / BLC		WDR	WDR
Day/Night		Yes (ICR)	Yes (ICR)
ABF (Auto Back Focus) / Focus Assist		—	—
Min. Illumination	Color	0.2 lx @F1.4	0.2 lx @F2.0
	Color (Sens up)	—	—
	B/W	0 lx @F2 (IR on)	0 lx @F2 (IR on)
	B/W (Sens up)	—	—
Lens		f=2.7-12mm, F1.4	f=3.6 mm, F2
Angular field of view	16 : 9	H: 37 to 99 deg. V: 21 to 52 deg.	H: 87 deg. V: 48 deg.
	4 : 3	—	—
Adjusting Angle	Pan	(+120 to -240 deg.)	(+120 to -240 deg.)
	Tilt	(+85 to -30 deg.)	(+85 to -30 deg.)
Optical Zoom		4.4x	3.6x
Digital Zoom		4x	4x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	—
VIQS		Yes (4-areas)	Yes (4-areas)
Max. Connection		20	20
Audio	In (Line)	Yes	Yes
	In (Built-in MIC)	—	—
	Out	Yes	Yes
	Codec	—	G.711 / G.726 / AAC
	Audio Detection Alarm	Yes	Yes
SD Memory Card	Slot	Yes (MicroSD, SDXC)	Yes (MicroSD, SDXC)
	Password & Alter Detection	—	—
	Audio REC	Yes	Yes
External I/O		Yes (1)	Yes (1)
Monitor Out		—	—
Vandal Resistant		IK10	IK10
Water and Dust Resistance		—	—
Temperature		-10 to +50 deg. C	-30 to +60 deg. C
Power Source		12 VDC / PoE	12 VDC / PoE
Dehumidification Device		—	—
Other Functions		IP66, IR LED, ONVIF S/G	IP66, IR LED, ONVIF S/G
Mounting Options			

Panasonic

Panasonic Security Viewer App `VERSION 3.2`

Panasonic Security Viewer is an application that can view the images from i-PRO SmartHD Series Network Cameras and Network Disk Recorders (WJ-NV200/WJ-NV300/WJ-ND400/WJ-HD716/WJ-HD616).

By connecting a terminal to a 3G/4G or wireless LAN (Wi-Fi), it is possible to view live images from cameras and recorded images stored on recorders.

Preface

To use the **Panasonic Security Viewer** via the Internet, it is recommended to register in the Dynamic DNS (DDNS) service.

To use the application via the Internet

Network disk recorder

Dynamic DNS Service

Application

Router   Internet   Mobile service provider network

Panasonic

iPhone, iPad, Android terminal
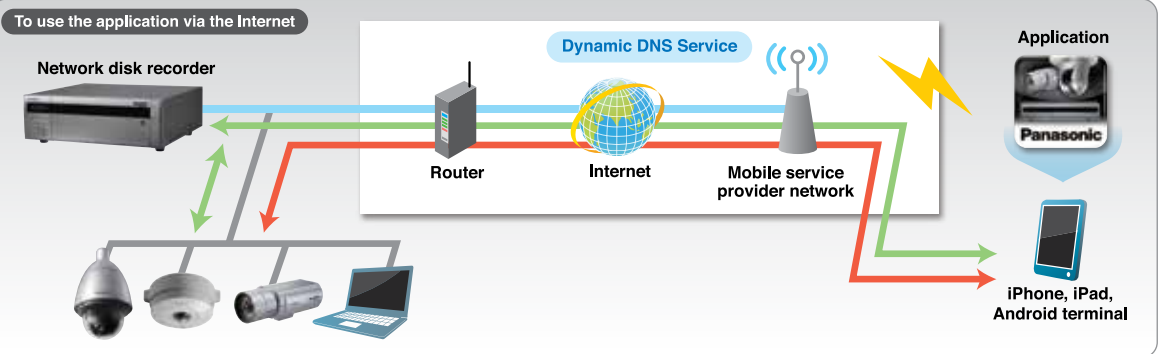
To use the application in a local network

Network disk recorder

Wireless Router

Application

Panasonic

iPhone, iPad, Android terminal
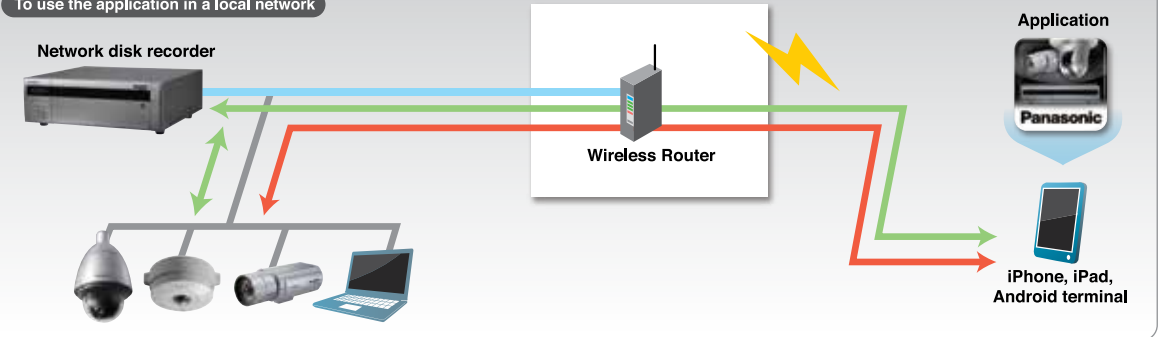
A PC is required to register a Dynamic DNS Service and configure the settings of the router.
● Download the Panasonic Security Viewer application on the Google Play™ store, Apple App Store.

Direct Camera connection
• Live monitoring

Via recorder
• Live monitoring
• Playback

Features of the application

Network disk recorder
• Live image: Live images from the network cameras connected to the recorder
• Playing back recorded images: To play back the images stored on the recorder
  * Re-encoding playback images for smartphones or tablet PC screen size/ frame rate
• Time and date search: To search the images to play back based on the time and date

Network camera
• Network camera control*
  (Resolution switchover, focus, panning/tilting, zoom, preset position switchover)
  * Depends on the network camera functions.

Android™

Outline of the application

Application name	Panasonic Security Viewer version 2.1
OS	Android™ OS 4.0 is recommended.
How to get the application	Download from the Google Play™ store.
Date to start the service	End of June
Operation check terminals	Panasonic Toughpad FZ-A1, JT-B1, Galaxy S2, Galaxy S3, Galaxy S4

● Download the application from here.
`Android™` http://security.panasonic.com/pss/security/psv/android/index.html

iPhone®/iPad®

Outline of the application

Application name	Panasonic Security Viewer version 2.1
OS	iOS 5.1 or later
How to get the application	Download from the App Store.
Date to start the service	End of June
Operation check terminals	iPhone4s, iPhone5, iPhone5S, iPad2, iPod touch (5th)

● Download the application from here.
`iPhone / iPad` http://security.panasonic.com/pss/security/psv/ios/index.html

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Easily migrate to an advanced IP system while still using the existing assets of your analog system

Effective utilization of analog cameras

ENCODER

• Analog cameras can be connected to the IP network simply by connecting them to the encoder.
• A maximum of four analog cameras can be connected to the WV-GXE500, and one analog camera can be connected to the WV-GXE100.
• Video captured by analog cameras can be saved to a recorder installed on the IP network in the same way as network cameras.

Basic System Connection Example

Analog Cameras   Analog Camera
Coaxial cable
IP Network cable

Network Switch

WJ-GXE500   WJ-GXE100

Network Cameras   **IP NETWORK**   Network Disk Recorder WJ-NV300

Network Switch
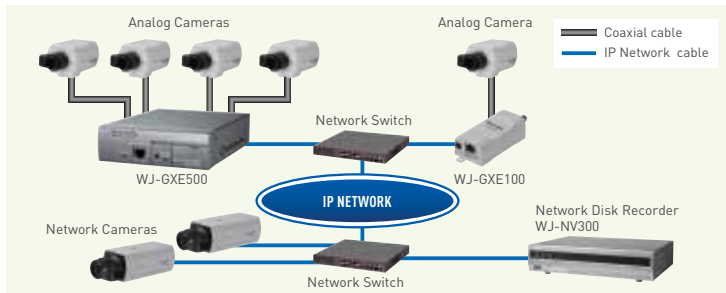
4 CH H.264 Video Encoder
WJ-GXE500
(12 V DC or PoE)

H.264 MPEG-4 JPEG

Optional Accessory

EIA 48.26 cm (19 inch) Rack Mount Bracket
WV-Q204/2S
(for mounting three WJ-GXE500)
Joint bracket
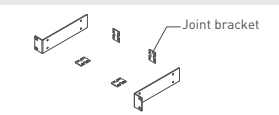
1 CH H.264 Video Encoder
WJ-GXE100
(12 V DC or PoE)

H.264 JPEG Onvif | S

Effective utilization of cabling

COAXIAL LAN CONVERTER

• The coaxial cables of existing analog cameras can be used for expanding the reach of the IP network.

Basic System Connection Example

IP NETWORK
Coaxial cable
Ethernet cable

Network (IP) Camera

PoE Switching HUB

PoE power receiving or connection to the power supply

WJ-PR204
4-channel receiver side unit

WJ-PC200
Camera side unit
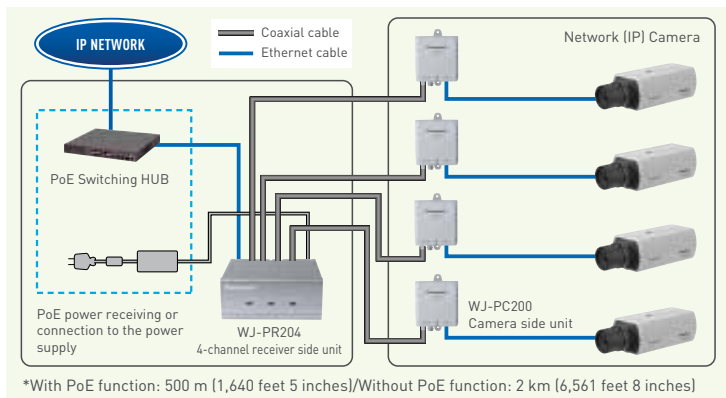
*With PoE function: 500 m (1,640 feet 5 inches)/Without PoE function: 2 km (6,561 feet 8 inches)

Coaxial LAN cables can be used up to distances of 2 km.
Power can also be supplied to PoE cameras for distances of up to 500 m, PoE+ cameras for distances of up to 300 m.

Coaxial - LAN Converter with PoE function

4-channel receiver side unit
WJ-PR204

Camera side unit
WJ-PC200

1-channel receiver side unit
WJ-PR201
(Indoor use only)

NEW Receiver side unit   Camera side unit

Optional Accessory

Rack Mount Connecting Fitting
BY-HCA10A
(for mounting three or four Receiver side unit)

Network Video Decoder

Multi Channel High Definition Video Decoder
WJ-GXD400
(12 V DC, 100 V -240 V AC adaptor attached)

H.264 MPEG-4 JPEG

• Up to 256 cameras, including cameras connected to the i-Pro Network Video Encoder (WJ-GXE500), can be registered
• HDMI interface supporting 1,920 x 1,080 display size
• 1x 4VGA image with 2x VGA images or 6x VGA images can be displayed in multiscreen mode
• Each of VGA images can be displayed at 25 frames/s.
• Superior reliability and installation flexibility with an embedded OS
• Up to 64 camera groups can be registered and called up in response to power on, group sequence and schedule program.

Optional Accessories

EIA 48.26 cm (19 inch) Rack Mount Bracket
WV-Q204/1S
(for mounting one WJ-GXD400)
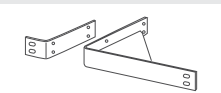
EIA 48.26 cm (19 inch) Rack Mount Bracket
WV-Q204/2S
(for mounting two WJ-GXD400)
Joint bracket
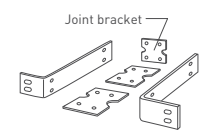
*Only 3 pieces of joint brackets are necessary. One piece of joint bracket will be unnecessary.

Panasonic

Turbo-RAID Network Disk Recorder **NEW**

WJ–NX400
(120 V AC: NTSC, 220-240 V AC: PAL)

H.265

Optional Accessory

Hard Disk Extension Unit
WJ–HXE400
Power Source
120 V AC, 60 Hz (NTSC)
220 - 240 V AC, 50 Hz (PAL)
Power Consumption approx. 85 W

- Supports H.265 / H.264 and Motion JPEG recording
- Up to 128 network cameras can be connected and
  recorded (Video and Audio) *additional camera kit required.
- Up to 54 HDD slots with 9 HDD slots in the main unit and
  five WJ-HXE400 optional Extension Units each with 9 HDD slots
- Turbo-RAID recording keeps high throughput
  performance, no needed an additional unit.
- High-reliable HDD management reducing TCO
- Easy setting with WV-ASM300 and Easy operation
- Secure communication
- Extension Software WJ-NXE40W Shipping 32 Channel
  Extension Software for WJ-NX400
- Secure Communications WJ-NXS01W Shipping Secure
  Communications 1 channel license (4/16/32 Channels
  Version available)

Hard Disk Extension Unit
WJ-HDE400 | 6TB HDD Canister/6000 | 4TB HDD Canister/4000 | 3TB HDD Canister/3000

Network Disk Recorder **NEW**

WJ–NX300
(120 V AC: NTSC, 220-240 V AC: PAL)

H.265

Optional Accessories

Hard Disk Extension Unit
WJ–HXE400
Power Source
120 V AC, 60 Hz (NTSC)
220 - 240 V AC, 50 Hz (PAL)
Power Consumption approx. 85 W

Rackmount
WV-Q202

- 16 ch. expandable to 32 ch. camera input. Supports H.265 / H.264 mixed recordings.
- No camera license fees with a default number of cameras; no annual license
  updates required.
- Built-in GUI and Dual HDMI (4K/FHD) outputs
- Up to 22 HDD with 4 HDD slots in the main unit and 2- WJ-HXE400
  optional Extension Units each with 9 HDD slots
- Automatic camera configuration
- Image search with thumbnails
- High-speed copy to USB storage
- Significant reduction of storage space usage through H.265 and Smart Coding.
- Secure Communications WJ-NXS01W Shipping Secure Communications
  1 channel license (4/16/32 Channels Version available)
- Symantec device certificates pre-installed

*Secure Communication Kits are required.

Hard Disk Extension Unit
WJ-HDE400 | 6TB HDD Canister/6000 | 4TB HDD Canister/4000 | 3TB HDD Canister/3000

Network Disk Recorder **NEW**

WJ-NX200
(120 V AC: NTSC, 220 V -240 V AC: PAL)

H.265

- No camera license fees with a default number of cameras; no annual license
  updates required.
- Built-in GUI and Dual HDMI (4K/FHD) outputs
- Automatic camera configuration
- Image search with thumbnails
- High-speed copy to USB storage
- Significant reduction of storage space usage through H.265 and Smart Coding.
- 9 ch. expandable to 16 ch. camera input. Supports H.265 / H.264 mixed recordings.
- Symantec device certificates pre-installed

*Secure Communication Kits are required.

Optional Accessory

Rackmount
WV-Q202

Easy Operation and Setup without PC

Main Monitor (HDMI) Sub Monitor (HDMI) Sub Monitor (BNC)

Speaker with amplifier

Network Cameras × Max.32

PC
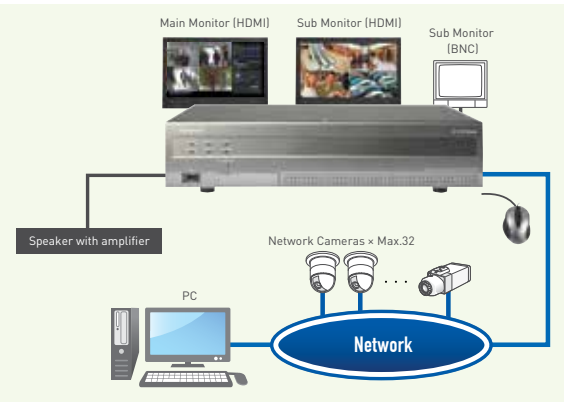
Network

VIDEOINSIGHT® MonitorPlus
Server based recording and video management platform

Scalable enterprise VMS solution that captures, manages and stores video surveillance across a network - on a single or multiple locations - and supports the broadest range of IP and analog camera models. Video Insight is the perfect solution for multi-facility configurations including schools, universities, hospitals, healthcare providers, law enforcement and SMBs.

NO LICENSE REQUIRED FOR SELECT PANASONIC CAMERAS
Unlimited Video Insight software license is available with the purchase of select Panasonic cameras manufactured after October 2014.

SURVEILLANCE FROM ANYWHERE
Monitor Station, Web Client and Mobile App share powerful features that allow you to access live and recorded video no matter where you are.

SUPPORT FOR 3,000 CAMERAS FROM 100+ MANUFACTURERS

WIDE ACCESS CONTROL INTEGRATION
Video Insight supports single and bi-directional integration of access control alarms from the leading vendors.

SUPPORT FOR OVER 130 ENCODERS
Integration to over 130 encoders so that our customers can affordably convert analog-to-IP and maximize the use of existing resources by turning their analog video system into a network video system.

i-PRO Management Software

WV-ASM300

EXTENSION SOFTWARE

WV-ASE202 /
ASE203 / ASE204 /
ASE205 / ASE306

WV-ASM300

(System Controller WV-CU950 and monitor displays are optional.)

Optional Accessory

Ethernet System Controller
with 3D-Joystick & Jog/Shuttle
WV-CU950

Easy setting : New WV-ASM300 software enable a whole setting from camera configuration to recorder configuration.

- Up to 100 recorders, 64 encoders and 256 directly connected cameras can be registered. Up to 6,400 cameras registered in the recorders and 256 cameras registered in the encoders are automatically registered in the WV-ASM300 (the number of the cameras depends on the recorder and encoder).
- Encryption of SSL and data encryption support latest "AES-256bit key" strong encryption
- MP4 data direct download from WJ-NX400
- When used with WJ-NX400 series, VMD, thumbnail search can be operated.

- 1-screen/4-screen PTZ compensation function (hereinafter compensation function) from the fish-eye images of the Panasonic Fisheye network cameras (WV-SFV481 / WV-SFN480 / WV-SF438 / WV-SF448 / WV-SW458)
- Supports 360-degree Network Microphone (WV-SMR10)
- Selecting the camera icon in map window, a still image of the camera is overlaid.
- Live window, Map window in addition to the Operation window (3 monitors)
- Control using the Ethernet System Controller WV-CU950
∗ To use the multi-monitor function, it is necessary to install an additional video card on the PC in use.

WV-ASE202
- Expand the maximum numbers of screens to 64.
- Up to 4 live windows.
- Multi-monitor function using up to 6 PC monitors.
- To display the operation window, the map window and the 4 map windows simultaneously.

WV-ASE203
- Expand the maximum numbers of registered recorders, encoders and cameras to 100, 64 and 256 respectively.
- Up to 4 licenses for the WV-ASE203 can be added.

WV-ASE204
- Decoder registration : Up to 10 decoders

WV-ASE205
- Visibility Enhancement Function

| Spatial Tonal Correction | Snowfall and Rainfall Noise Reduction | Multi-frame Synthesis Noise Reduction |

Extension Software WV-ASE306
- WV-ASE306 extension allows WV-ASM300 to control and manage recording on VI Server

Upgrade license WV-ASM300UG
- Upgrade license from WV-ASM200 to WV-ASM300

WV-ASM970W   `VERSION 18`

IP MATRIX CLIENT SOFTWARE

- Multimonitor option enables simultaneous use of operation screen and monitor screen (1 / 4 / 7 / 9 / 10 / 13 / 16 split) on a dedicated monitor; two-monitor operation is also available
- Up to 30 ips/camera can be displayed in 16 split screens in MPEG-4 2 Mbps mode (depending on the camera, camera setup and PC performance)
- Up to 30 ips/camera can be displayed in 16 split screens in H.264 1.5 Mbps mode with VGA (depending on the camera, camera setup and PC performance)
- Image resolution dynamically changes depending on the screen mode: VGA for quad screen, QVGA for 16 split screens, enabling optimum network usage (depending on the camera mode)
- Decoder mode supported (WV-ASM970W can be used as PC-based decoder instead of WJ-GXD400)
- WV-ASE902W: Max. 16 screen x 4 monitor support

SYSTEM COMPONENTS

IP Matrix Client Software
WV-ASM970W

Ethernet System Controller with
3D-Joystick and Jog/Shuttle
WV-CU950
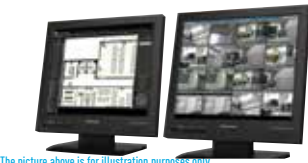
The picture above is for illustration purposes only.

PMPU3000   `VERSION 18`

IP MATRIX APPLIANCE

- Easy and smooth integration from analog to IP system
- Flexible system design: analog, IP and hybrid analog/IP
- Up to 64 recorders, 1,024 monitors and 2,048 cameras (in case with encoder) can be registered
- Camera/sequence/monitor selection, camera control and recorder control can be made with the optional system controller WV-CU950

- Supported recorders: WJ-ND400 series, WJ-ND300 series, WJ-ND200 series, WJ-NV200 series, WJ-HD300 series, WJ-RT416 series, WJ-HD616/716 series
- Redundant function supported (redundant function can consist of two WV-ASC970 servers as main server and standby server)
- Up to 64 ND400 recorders can be registered as standby recorder for backup purpose of serious problems on main recorders

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FACEPRO – WV-ASF900W

FACIAL RECOGNITION ANALYTICS PLATFORM

FACIAL RECOGNITION ANALYTICS PLATFORM RUNNING IN THE VIDEO SURVEILLANCE SYSTEM
- Add-on face matching function: Add the face matching function by simply adding the necessary devices and the software
- Up to 20 cameras can be connected to each server

FACE SEARCH
- Face images that the camera detects are stored and can be searched later
- By searching the face database, you can display the results of each camera in chronological order and find movement and location of persons
- Specify camera or date in detected face images and display the result in the list in similar order

FACE MATCHING
- When faces are matched with registered people, alarm of face matching is output in real time, and an alarm history is displayed in the list
- Double clicking on facial alarm notification can play back video segment on the control monitor

PEOPLE COUNTING, AGE AND GENDER STATISTICS
- Count people with detected faces and evaluate their age and gender
- Display the result on the screen with statistical graph
- The statistical data can be saved as a CSV file for analytical use

FACEPRO® SYSTEM COMPONENTS

| **ASF9001R32G1TB4C**
1-Rack 32GB Server and FacePro Software
with 4-channel licenses | **WV-ASFE901W**
FacePro Single Channel Expansion | **WV-ASFE904W**
FacePro Four Channel Expansion License |

Panasonic

CAMERA TYPE		PTZ	
Indoor / Outdoor		OUTDOOR	INDOOR
Appearance		**WV-CW594A**	**WV-CS584**
Sensor		1/4 type interline transfer CCD	1/4 type interline transfer CCD
Resolution	Horizontal	650 TV lines	650 TV lines
Super Dynamic / WDR / BLC		Super-D	Super-D
Day/Night		Yes (ICR)	Yes (ICR)
Focus Adjustment		Auto Focus	Auto Focus
Built-in IR LED		—	—
Min. Illumination	Color	0.5 lx	0.5 lx
	Color (Sens up)	0.016 lx	0.016 lx
	B/W	0.04 lx	0.04 lx
	B/W (Sens up)	0.0013 lx	0.0013 lx
Lens		f= 3.3 to 119 mm, F1.4	f= 3.3 to 119 mm, F1.4
Angular field of view		H: 1.7° (Tele) to 60.2° (Wide) V: 1.3° (Tele) to 46.0° (Wide)	H: 1.7° (Tele) to 60.2° (Wide) V: 1.3° (Tele) to 46.0° (Wide)
Adjusting Angle	Pan	360° endless	360° endless
	Tilt	−5° to 185° (horizontal - vertical - horizontal)	−5° to 185° (horizontal - vertical - horizontal)
	Optical Zoom	36x	36x
	Digital Zoom	20x	20x
VMD (Video Motion Detection)		Yes	Yes
i-VMD (Intelligent VMD)		Scene Change	Scene Change
Camera title (OSD)		Yes	Yes
External I/O		4 inputs (ALARM IN 1 - ALARM IN 4) 2 outputs (ALARM / AUX1, BW / AUX2)	4 inputs (ALARM IN 1 - ALARM IN 4) 2 outputs (ALARM / AUX1, BW / AUX2)
Vandal Resistant		—	—
Water and Dust Resistance		IP66	—
Dehumidification device		—	—
Temperature		-58°F to +122°F	+14°F to +122°F
Power Source		24 V AC	24 V AC
Other Functions		WV-CW594A : Rain wash coating	—
Options	Smoke Dome Cover	—	Smoke Dome Cover WV-CS4SA
	Bracket	Wall Mount Bracket WV-Q122A	Ceiling Mount Bracket WV-Q105A
			Embedded Ceiling Mount Bracket WV-Q126A
		Ceiling Mount Bracket WV-Q121B	Pendant Mount Bracket WV-Q117A
			Wall Mount Bracket WV-Q118B
	Heater Unit	—	—
Mounting Options			See pages 54, 55

CAMERA TYPE		DOME		
Indoor / Outdoor		OUTDOOR	INDOOR	
Appearance		**WV-CW634S, WV-CW634F**	**WV-CF624**	**WV-CF634**
Sensor		1/3 type interline transfer CCD	1/3 type interline transfer CCD	1/3 type interline transfer CCD
Resolution	Horizontal	700 TV lines or more	650 TV lines	650 TV lines
Super Dynamic / WDR / BLC		Super-D	Super-D	Super-D
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
Focus Adjustment		ABF	Manual	ABF
Built-in IR LED		—	—	—
Min. Illumination	Color	0.08 lx	0.08 lx	0.08 lx
	Color (Sens up)	0.0024 lx	0.0025 lx	0.0025 lx
	B/W	0.008 lx	0.008 lx	0.008 lx
	B/W (Sens up)	0.00024 lx	0.0003 lx	0.0003 lx
Lens		f= 3.8 to 8.0 mm, F1.4	f= 2.8 to 10 mm, F1.4	f= 2.8 to 10 mm, F1.4
Angular field of view		H: 33.6° (Tele) to 74.9° (Wide) V: 25.2° (Tele) to 55.7° (Wide)	H: 27.6° (Tele) to 100.8° (Wide) V: 20.7° (Tele) to 73.8° (Wide)	H: 27.6° (Tele) to 100.8° (Wide) V: 20.7° (Tele) to 73.8° (Wide)
Adjusting Angle	Pan	±170°	180° to −170°	180° to −170°
	Tilt	±75°	±90°	±90°
	Optical Zoom	2.1x	3.6x	3.6x
	Digital Zoom	2x	2x	2x
VMD (Video Motion Detection)		Yes	Yes	Yes
i-VMD (Intelligent VMD)		Scene Change	Scene Change	Scene Change
Camera title (OSD)		Yes	Yes	Yes
External I/O		—	—	—
Vandal Resistant		IEC 60068-2-75 test Eh, 50J	—	—
Water and Dust Resistance		IP66	—	—
Dehumidification device		—	—	—
Temperature		+14°F to +140°F −30°C to 60°C (With optional heater)	+14°F to +122°F	+14°F to +122°F
Power Source		24 V AC or 12 V DC	24 V AC or 12 V DC	24 V AC or 12 V DC
Other Functions		—	—	—
Options	Smoke Dome Cover	Smoke Dome Cover WV-CW4SA	—	—
	Bracket	Mount Bracket (for WV-CW634F) WV-Q115A	Embedded Ceiling Mount Bracket (Sail white) WV-Q174B	Embedded Ceiling Mount Bracket (Sail white) WV-Q174B
		Embedded Ceiling Mount Bracket WV-Q169A		
	Heater Unit	Heater Unit WV-CW5HA	—	—
Mounting Options		See pages 55	See pages 55	See pages 55

Left Table

CAMERA TYPE		DOME			BOX
Indoor / Outdoor		INDOOR			OUTDOOR
Appearance		WV-CF344	WV-CF354	WV-CF314L	WV-CW314L
Sensor		1/3 type interline transfer CCD	1/3 type interline transfer CCD	1/3 type interline transfer CCD	1/3 type interline transfer CCD
Resolution	Horizontal	650 TV lines	650 TV lines	650 TV lines	650 TV lines
Super Dynamic / WDR / BLC		BLC	BLC	BLC	BLC
Day/Night		Yes (Electrical)	Yes (Electrical)	Yes (ICR)	Yes (ICR)
Focus Adjustment		Focus Assist	ABF	ABF	ABF
Built-in IR LED		—	—	Yes (20 m)	Yes (50 m)
Min. Illumination	Color	0.08 lx	0.08 lx	0.08 lx	0.08 lx
	Color (Sens up)	0.0025 lx	0.0025 lx	0.0025 lx	0.0025 lx
	B/W	0.05 lx	0.05 lx	0 lx (with IR LED)	0 lx (with IR LED)
	B/W (Sens up)	0.0016 lx	0.0016 lx	—	—
Lens		f= 2.8 to 10 mm, F1.4	f= 2.8 to 10 mm, F1.4	f= 2.8 to 10 mm, F1.3	f= 2.8 to 10 mm, F1.3
Angular field of view		H: 27.6° (Tele) to 100.3° (Wide) V: 20.7° (Tele) to 73.5° (Wide)	H: 27.8° (Tele) to 100.3° (Wide) V: 20.9° (Tele) to 73.4° (Wide)	H: 27.65° (Tele) to 100.8° (Wide) V: 20.75° (Tele) to 73.85° (Wide)	H: 27.65° (Tele) to 100.8° (Wide) V: 20.75° (Tele) to 73.85° (Wide)
Adjusting Angle	Pan	180° to –170°	180° to –170°	180° to –170°	—
	Tilt	±90°	±90°	0 to 75°	—
	Optical Zoom	3.6x	3.6x	3.6x	3.6x
	Digital Zoom	2x	2x	2x	2x
VMD (Video Motion Detection)		Yes	Yes	Yes	Yes
i-VMD (Intelligent VMD)		Scene Change	Scene Change	Scene Change	Scene Change
Camera title (OSD)		Yes	Yes	Yes	Yes
External I/O		—	—	—	—
Vandal Resistant		—	—	—	—
Water and Dust Resistance		—	—	—	IP66
Dehumidification device		—	—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		24 V AC or 12 V DC	24 V AC or 12 V DC	24 V AC or 12 V DC	24 V AC or 12 V DC
Other Functions		—	—	—	—
Options	Smoke Dome Cover	—	—	—	—
	Bracket	Embedded Ceiling Mount Bracket (Sail white) WV-Q174B	Embedded Ceiling Mount Bracket (Sail white) WV-Q174B	—	—
	Heater Unit	—	—	—	—
Mounting Options		See pages 55	See pages 55	See pages 55	

Right Table

CAMERA TYPE		BOX			
Indoor / Outdoor		INDOOR			
Appearance		WV-CP630/WV-CP634	WV-CP620/WV-CP624	WV-CP300/WV-CP304	WV-CP310/WV-CP314
Sensor		1/3 type interline transfer CCD	1/3 type interline transfer CCD	1/3 type interline transfer CCD	1/3 type interline transfer CCD
Resolution	Horizontal	700 TV lines	650 TV lines	650 TV lines	650 TV lines
Super Dynamic / WDR / BLC		Super-D	Super-D	BLC	BLC
Day/Night		Yes (ICR)	Yes (ICR)	Yes (Electrical)	Yes (ICR)
Focus Adjustment		ABF	Focu Assist	Focu Assist	Focu Assist
Built-in IR LED		—	—	—	—
Min. Illumination	Color	0.08 lx	0.08 lx	0.08 lx	0.08 lx
	Color (Sens up)	0.003 lx	0.0025 lx	0.0025 lx	0.0025 lx
	B/W	0.008 lx	0.008 lx	0.05 lx	0.008 lx
	B/W (Sens up)	0.0003 lx	0.00025 lx	0.0016 lx	0.00025 lx
Lens		optional	optional	optional	optional
Angular field of view		—	—	—	—
Adjusting Angle	Pan	—	—	—	—
	Tilt	—	—	—	—
	Optical Zoom	—	—	—	—
	Digital Zoom	2x	2x	2x	2x
VMD (Video Motion Detection)		Yes	Yes	Yes	Yes
i-VMD (Intelligent VMD)		Scene Change	Scene Change	Scene Change	Scene Change
Camera title (OSD)		Yes	Yes	Yes	Yes
External I/O		ALARM IN : 1 (OFF / ALARM / VMD PERMIT / BW) ALARM OUT : 1 (OFF / ALARM / BW)	Alarm IN 1pc, Alarm OUT 1pc	—	—
Vandal Resistant		—	—	—	—
Water and Dust Resistance		—	—	—	—
Dehumidification device		—	—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		WV-CP630: 120 V AC WV-CP634: 12 V DC or 24 V AC	WV-CP620: 120 V AC WV-CP624: 12 V DC or 24 V AC	WV-CP300: 120 V AC WV-CP304: 12 V DC or 24 V AC	WV-CP310: 120 V AC WV-CP314: 12 V DC or 24 V AC
Other Functions		—	—	—	—
Options	Smoke Dome Cover	—	—	—	—
	Bracket	—	—	—	—
	Heater Unit	—	—	—	—
Mounting Options		See page 61	See page 61	See page 61	See page 61

WJ-HD716 (120V AC: NTSC)

16 CH REAL-TIME H.264 DIGITAL DISK RECORDER

WJ-HD716

WJ-HD616 (120V AC: NTSC)

16 CH H.264 DIGITAL DISK RECORDER

- Dual HDMI Full HD 1080i (1920 x 1080) display
- H.264 (high-profile) codec reduces bandwidth by up to 40% compared with MPEG-4
- SD5 Link (Super Dynamic 5 Link) with intelligent-Video Motion Detection (i-VMD) alarm
- Real-time recording (WJ-HD716) and 16CH 2x monitors real-time live
- Up to 31 HDD slots with four HDD slots in the main unit and three WJ-HDE400 optional extension units, each with nine HDD slots

OPTIONAL ACCESSORIES

RAID Board
WJ-HDB601A

Built-in DVD Drive
WJ-HDB611A

Hard Disk Extension Unit
WJ-HDE400

6TB HDD
Canister/6000

4TB HDD
Canister/4000

3TB HDD
Canister/3000

POE Plus Injector
IEEE 802.3at/IEEE 802.3af
PPOEP01I01
Supports indoor and outdoor PTZ cameras

WV-CU950

ETHERNET SYSTEM CONTROLLER WITH 3D-JOYSTICK AND JOG/SHUTTLE

- For smooth operation of Ethernet/PS data interfaced devices, WV-ASM200W/WV-ASC970 and System650EX/System650/System150 (WJ-SX150A version 2.0 or higher)
- Integrated system control: camera, recorder and switcher
- User-level management and user-assignable buttons
- Universal design for right- or left-handed users
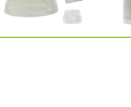
WV-CU650

RS-485 SYSTEM CONTROLLER WITH 3D-JOYSTICK AND JOG/SHUTTLE

- For smooth operation of PS data interfaced devices and System650/System150 (WJ-SX150A version 2.0 or higher)
- Integrated system control: camera, recorder and switcher
- User-level management and user-assignable buttons
- Universal design for right- or left-handed users

CAMERA ACCESSORIES

MODEL	DESCRIPTION/TYPE	COMPATIBILITY	IMAGE
WV-CF5SA	Smoke Dome	WV-SFN631L/611L, WV-SFN310A/311A, WV-SFN531, WVS2110/S2111L/S2131L	
WV-CS4SA	Smoke Dome	WV-CS584	
WV-CS5C	Clear Dome	WV-SC588A, WV-SC387A	
WV-CS5S	Smoke Dome	WV-SC588A, WV-SC387A	
WV-CR1S	Smoke Dome	WV-SFR631L/611L, WV-SFR310A/311A, WV-SFR531, WV-S2211L/S2231L	
WV-CW4C	Clear Dome	WV-NW502S, WV-CW504S, WV-CW364S/334S	
WV-CW4SA	Smoke Dome	WV-NW502S, WV-CW634S, WV-CW364S/334S	
WV-CW7S	Smoke Dome	WV-SFV631L/631LT/611L, WV-SFV310A/311A, WV-SFV531, WV-S2511LN/S2531LN	
WV-CW6SA	Smoke Dome	WV-SW158/155/155MA/152/152M, WV-SF138/135/132	
WV-Q7118	Extended Shade Cover	WV-SFV631L/631LT/611L, WV-SW3XX, WV-SW5XX, WV-SFV310/311, WV-SFV531	
WV-CW5HA	Optional Heater	WV-CW634S/WV-CW364S/334S	
WV-CW7SN	Smoke Dome with Clearsight coating	WV-SFV631L/631LT/631L WV-SFV310A/311A, WV-SFV531 WV-S2511LN/S2531LN	

HOUSING AND MOUNTING BRACKETS FOR DOME CAMERAS

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE					
			OUTDOOR VANDAL			INDOOR DOME		
			WV-S2531LTN/2531LN/2511LN WV-SFV631L/631LT/611L, WV-SFV311A/310A, WV-SFV531	WV-SW458, WV-SFV481	WV-CW634S/634F WV-CW364S/334S	WV-SFV781L	WV-S2131L/S2111L/S2110/2231L/2211L WV-SFN631L/611L, WV-SFR631L/611L, WV-SFN311A/310A, WV-SFR311A/310A, WV-SFN531, WV-SFR531	WV-CF600 SERIES WV-CF300 SERIES
WV-Q169A		Indoor Embedded Ceiling Mount Bracket	Yes		Yes			
WV-Q174B		Indoor Embedded Ceiling Mount Bracket					Yes	Yes (Except WV-CF314L)
PRCM1		Indoor Embedded Ceiling Mount Bracket	Yes		Yes		Yes	Yes
PPMS1		Indoor Indoor Pendant Mount Housing, Black					Yes (Except WV-SFR531/S2213L/2211L WV-SFR631L/611L)	Yes
PPMS1B		Indoor Indoor Pendant Mount Housing, Beige					Yes (Except WV-SFR531/S2213L/2211L WV-SFR631L/611L)	Yes
PS484S		Outdoor Vandal-resistant Shroud-Beige	Yes	Yes	Yes			
PPM484S		Outdoor Vandal-resistant Pole Mount-Beige	Yes	Yes	Yes			
PCM484S		Outdoor Vandal-resistant Corner Mount-Beige	Yes	Yes	Yes			
PHM484S		Outdoor Vandal-resistant Hanging Mount-Beige	Yes	Yes	Yes			
PWM484S		Outdoor Vandal-resistant Wall Mount-Beige	Yes	Yes	Yes			

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HOUSING AND MOUNTING BRACKETS FOR DOME CAMERAS (CONT.)

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE			
			OUTDOOR VANDAL			
			WV-S2531LTN/2531LN/2511LN WV-SFV631L/631LT/611L, WV-SFV311A/310A, WV-SFV531	WV-SW458, WV-SFV481	WV-CW634S/634F WV-CW364S/334S	WV-SFV781L
WV-Q7118		Outdoor Extended Sun Shade	Yes		Yes	
WV-Q124		Outdoor Shroud Bracket requires WV-Q122A	Yes	Yes	Yes	
PWM781		Outdoor Wall Mount & Shroud				Yes
PWM485S		Outdoor Vandal resistant Wall Mount-Cool Gray	Yes	Yes	Yes	
PCM485S		Outdoor Vandal resistant Corner Mount-Cool Gray	Yes	Yes	Yes	
PPM485S		Outdoor Vandal resistant Pole Mount-Cool Gray	Yes	Yes	Yes	
PS485S		Outdoor Vandal-resistant Shroud-Cool Gray	Yes	Yes	Yes	

HOUSING AND MOUNTING BRACKETS FOR INDOOR PTZ CAMERAS

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE			
			PTZ			
			WV-SC588A/WV-SC387A WV-S6131/WV-S6111	WV-SC384/WV-SC385	WV-S6130	WV-CS584
WV-Q117		Indoor/Pendant Supended Ceiling Mount				Yes
WV-Q118B		Indoor/Wall Wall Mount Bracket, Silver				Yes
WV-Q119		Indoor/Wall Wall Mount Bracket, White	Yes			
WV-Q126 WV-Q126A		Indoor/Ceiling Embedded Ceiling Mount Bracket	Yes (WV-Q126A)			Yes
WV-Q154C		Indoor/Wall Wall Mount Bracket—Clear Dome		Yes	No	
WV-Q158C				No	Yes	
WV-Q154S		Indoor/Wall Wall Mount Bracket—Smoke Dome		Yes	No	
WV-Q158S				No	Yes	
WV-Q155C		Indoor/Ceiling Embedded Ceiling Mount Bracket—Clear Dome		Yes	No	
WV-Q159C				No	Yes	
WV-Q155S		Indoor/Ceiling Embedded Ceiling Mount Bracket—Smoke Dome		Yes	No	
WV-Q159S				No	Yes	
WV-Q156C		Indoor/Ceiling Ceiling Mount Bracket—Clear Dome		Yes	No	
WV-Q160C				No	Yes	
WV-Q156S		Indoor/Ceiling Ceiling Mount Bracket—Smoke Dome		Yes	No	
WV-Q160S				No	Yes	
WV-Q157		Inner Dome Cover		Yes	No	
WV-Q161C				No	Yes	
PISM5V		Indoor/Pendant/Clear 5" Indoor Vandalresistant Housing		Yes	Yes	
PIDV7CN		Indoor/Ceiling/Vandal 7" Indoor Recessed Ceiling Housing with Clear Dome	Yes	Yes	Yes	Yes

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HOUSING AND MOUNTING BRACKETS FOR INDOOR PTZ CAMERAS (CONT.)

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE PTZ		
			WV-SC588A/SC387A/ WV-S6131/6111	WV-SC384/385/WV-S6130	WV-CS584
PIDV7SN		Indoor/Ceiling/Vandal 7" Indoor Recessed Ceiling Housing with Smoke Dome	Yes	Yes	Yes
PDM9		Indoor/Ceiling 9" Indoor Recessed Ceiling Housing (Dome not included)			Yes
PID9		Indoor/Ceiling 9" Indoor Recessed Ceiling Housing (Dome not included)	Yes	Yes	Yes
POSM5V		Outdoor/Ceiling – 5" Outdoor Vandalresistant Housing 24V AC to 12V DC Converter		Yes	
PODV9CPTA		Outdoor/Pendant – 9" Outdoor Vandalresistant Dome Housing with Pendant Mount – Clear/H&B	Yes	Yes	Yes
PODV9CWTA		Outdoor/Wall – 9" Outdoor Vandalresistant Dome Housing with Wall Mount – Clear/H&B	Yes	Yes	Yes
POD9CA		Outdoor/Pendant – 9" Outdoor Dome Housing with Pendant Mount, Silver – Clear/H&B	Yes	Yes	Yes
POD9CWA		Outdoor/Wall – 9" Outdoor Dome Housing with Wall Mount, Silver – Clear/H&B	Yes	Yes	Yes
POD9CTA		Outdoor/Pendant – 9" Outdoor Dome Housing with Pendant Mount, White – Clear/H&B	Yes	Yes	Yes
POD9CWTA		Outdoor/Wall – 9" Outdoor Dome Housing with Wall Mount, White – Clear/H&B	Yes	Yes	Yes
PPFD9C		Outdoor/Pendant – 9" Outdoor Pressurized Dome Housing for Analog Camera – Clear/H&B			Yes
PPFD9CN		Outdoor/Pendant – 9" Outdoor Pressurized Dome Housing for Network Camera – Clear/H&B	Yes	Yes	

HOUSING AND MOUNTING BRACKETS FOR OUTDOOR PTZ CAMERAS

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE PTZ		
			WV-SW598A/WV-SW397B WV-X6131N/WV-X6511N/WV-S6530	WV-SW395A	WV-CW594A
PPRM30G		Outdoor Parapet Mount Short, Black	Yes	Yes	Yes
PPRM30GB		Outdoor Parapet Mount Short, Beige	Yes	Yes	Yes
PWM30G		Outdoor Parapet Mount Long, Black	Yes	Yes	Yes
PWM30GB		Outdoor Parapet Mount Long, Beige	Yes	Yes	Yes
PWM20G		Outdoor Gooseneck Wall Mount, Black	Yes	Yes	Yes
PWM20GB		Outdoor Gooseneck Wall Mount, Beige	Yes	Yes	Yes
PWM20GS		Outdoor Gooseneck Wall Mount, Silver	Yes	Yes	Yes
PSRCW2000B		Outdoor Parapet Rooftop Mount, Black	Yes	Yes	Yes
WV-Q122A		Outdoor Wall Mount Bracket	Yes	Yes	Yes
WV-Q121		Outdoor Ceiling Mount Bracket	Yes	Yes	Yes

HOUSING AND MOUNTING BRACKETS FOR OUTDOOR PTZ CAMERAS (CONT.)

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE PTZ			
			WV-X6531N/ WV-X6511N/WV-S6530N	WV-SW395A	WV-CW594A	WV-SUD638
PB24B		Outdoor Heavy Duty Junction Box	Compatible with PWM20G series, PWM638	Compatible with PWM20G series, PWM638	Compatible with PWM20G series, PWM638	Compatible with PWM20G series, PWM638
PACA4 PACA4B PACA4GR		Outdoor Corner Mount Adaptor PACA4-Black, PACA4B-Beige, PACA4GR-Cool Gray	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638
PAPM4 PAPM4B PAPM4GR		Outdoor Pole Mount Adaptor PAPM4-Black, PAPM4B-Beige, PAPM4GR-Cool Gray	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638	Compatible with PWM20G series, WV-Q122A, WV-SPWxxx series, PWM638
PAPM6		Outdoor Wall/Pole Mount Adaptor	Compatible with PWM20G series, PWM638	Compatible with PWM20G series, PWM638	Compatible with PWM20G series, PWM638	Compatible with PWM20G series, PWM638
PPMF12D		Outdoor Pendant Mount	Yes	Yes	Yes	No
PWM638		Outdoor Wall Mount Bracket Silver	No	No	No	Yes

HOUSING AND MOUNTING BRACKETS FOR FIXED CAMERAS

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE FIXED			
			WV-SPV781L WV-SPW631LT/SPW631/ WV-SPW611L/SPW611 WV-SPW311AL/531AL WV-S1511LN/1531LN/1531LTN	WV-SPN310A/311A WV-SPN531 WV-SPN631/611 WV-S1111/S1131	WV-SP105/102	WV-CP500 SERIES WV-CP600/CP300 SERIES
WV-Q120A		Outdoor Adapter Box	Included (Except WV-SP-W311AL/531AL)			
PUM8		Indoor/Wall Universal Camera Mount (Max. Weight 3 lbs.)		Yes	Yes	Yes
POD8CF		Outdoor/Pendant 8" Outdoor Dome Housing for Fixed Camera with Pendant Mount – Clear/H&B		Yes	Yes	Yes
POD8CWF		Outdoor/Wall 8" Outdoor Dome Housing for Fixed Camera with Wall Mount – Clear/H&B		Yes	Yes	Yes
POH1100		Outdoor/Wall 10" Outdoor Housing Wall Mount Included				Yes
POH1100HB		Outdoor/Wall 10" Outdoor Housing with Heater and Blowers Wall Mount Included – H&B				Yes
POH1100NWME		Outdoor/Wall 10" Outdoor Housing with Heater and Blowers with PoE Plus Wall Mount Included – H&B		Yes	Yes	
POH1100NWM		Outdoor/Wall – 10" Outdoor Housing with Heater and Blowers with PoE Plus with Midspan Wall Mount Included – H&B		Yes	Yes	
PACA4 PACA4B PACA4GR		Outdoor Pole Mount Adaptor PAPM4-Black, PAPM4B-Beige, PACA4GR-Cool Gray	Yes			
PAPM4 PAPM4B PAPM4GR		Outdoor Pole Mount Adaptor PAPM4-Black, PAPM4B-Beige, PAPM4GR-Cool Gray	Yes			
NEW PEHV1000		Indoor/Corner Elevator Housing Brushless Steel/Tempered Glass Vandal				
NEW PEHV1000SFN130		Indoor/Corner Elevator Housing Brushless Steel/ Tempered Glass Vandal Includes WV-SFN130 camera				

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VARIFOCAL LENSES FOR HD CAMERAS

SIZE	MODEL NO.	PICTURE	COMPANY	FOCAL LENGTH (MM)	APERTURE RATIO @ WIDE	AUTO IRIS	WV-S1131/1111	WV-SPN310/311 WV-SPN531 WV-SPN631/611	WV-V1170
1/3"	PLAMP2206		Fujinon	2.2~6.0	F1.3	Yes	No	Yes	No
1/3"	PLAMP2406		Tamron	2.4~6.0	F1.2	Yes	No	Yes	No
1/3"	PLAMP2808		Fujinon	2.8~8.0	F1.2	Yes	No	Yes	No
1/3"	PLAMP2812		Fujinon	2.8~12.0	F1.4	Yes	No	Yes	No
1/2.7"	PLAMP0722		Ricon	7.0~22.0	F1.4	Yes	No	Yes	No
1/3"	PLAMP0550		Tamron	5.0~50.0	F1.4	Yes	No	Yes	No
1/3"	PLZ15/33		Fujinon	15.0~50.0	F1.5	Yes	No	Yes	No
1/2.7"	PLAMP0850A		Tamron	8.0-50.0	F1.6	Yes	Yes	Yes	No
1/2.7"	PLAMP2808A		Tamron	2.8-8.0	F1.2	Yes	Yes	Yes	No
1/1.8"	PLAMP0490		Fujinon	4.1-9.0	F1.6	Yes	Yes	Yes	Yes

M12 LENSES FOR HD CAMERAS

SIZE	MODEL NO.	PICTURE	COMPANY	FOCAL LENGTH (MM)	APERTURE RATIO @ WIDE	AUTO IRIS	WV-SW158/ SF138	WV-SW155/ SF135	WV-SFN110/ SFN130, WV-SFV110/ SFV130	WV-SW115
1/3"	PLM12MP028/1		Evetar	2.8	F2.0	No	Yes	Yes	Included	Yes
1/3"	PLM12MP060/1		Evetar	6.0	F1.8	No	Yes	Yes	Yes	Yes
1/3"	PLM12MP120/1		Evetar	12.0	F1.8	No	Yes	Yes	Yes	Yes
1/3"	PLM12MP019/1		Sunny	1.95	F2.2	No	Included	Included	Yes	Included

Panasonic

VARIFOCAL LENSES FOR SD CAMERAS

SIZE	MODEL NO.	PICTURE	COMPANY	FOCAL LENGTH (MM)	APERTURE RATIO @ WIDE	AUTO IRIS	WV-CW634 SERIES	WV-CP500 SERIES WV-CP600 SERIES WV-CP300 SERIES
1/2"	PLAHS1770		Fujinon	7.0~70.0	F1.8	Yes		
1/3"	WV-LZA61/2S		Panasonic	3.8~8.0	F1.4	Yes		Yes
1/3"	WV-LZ62/8S		Panasonic	5.0~40.0	F1.6	Yes		Yes
1/3"	PLA22T3DN		Tamron	2.2	F1.2	Yes	Yes	Yes
1/3"	PLZ27/5DN		Fujinon	2.7~13.5	F1.3	Yes		Yes
1/3"	PLZ29/27		Fujinon	2.9~8.0	F0.95	Yes	Yes	Yes
1/3"	PLZ5/10		Fujinon	5.0~50.0	F1.6	Yes		Yes
1/3"	PLZ15/33		Fujinon	15.0~50.0	F1.5	Yes	Yes	Yes
1/3"	PLZ20/5		Tamron	20.0~100.0	F1.6	Yes		Yes

MONITORS

MODEL	TYPE	INFO	IMAGE	DESCRIPTION	COMPATIBLE WITH
PLCD9C	Monitors	LCD Monitors		9" LCD monitor, 800 x 600	
PLCD9C/2	Monitors	LCD Monitors		2-9" LCD monitor, 800 x 600 with rack mount	
PLCD24HDA	Monitors	LCD Monitors		24" Full HD LCD, 1920 x 1080, 16:9 aspect ratio, two built-in speakers, 2x BNC input, S-Video in/output, RGB input, DVI input, HDMI input	
PLCD27HDA	Monitors	LCD Monitors		27" Full HD LED, 1920 x 1080, 16:9 Aspect Ratio, two built-in speakers, 2x BNC input, S-Video in/output, DVI input, HDMI input	
PLCD42HDA	Monitors	LCD Monitors		42" Full HD LED, 1920 x 1080, 16:9 aspect ratio, two built-in speakers, 2x BNC input, S-Video in/output, DVI input, HDMI input, pedestal stand	
PRMK08	Monitors	Accessories	Image Not Available	Rack mount kit for PLCD15V, PLCD20P monitors	PLCD15V PLCD19P

NEW NETWORK CAMERA MODEL NUMBER FORMAT

W	V	-	S	2	5	3	1	L	T	N	
			Series	Form	Environment	Resolution	Grade	Other features	Minor Change	Region (J/H)	

Series	Form	Environment	Resolution	Grade	Other features	Minor Change
	9 : -	9 : -	9 : -	9 :	L : LED	D :
	8 : -	8 : -	8 :6K(24MP)	8 :	N: ClearSight	C :
	7 : PTZ(Aero)	7 : -	7 :4K (12MP)	7 :	M: M12	B :
X:Hi-end	6 : PTZ(Dome)	6 : -	6 :	6 :	W: Wireless	A :
	5 : PT	5 : Outdoor Vandal	5 :SMP	5 :	F : Optical I/F	
S:Standard	4 : 360 deg.	4 : Outdoor normal	4 :	4 :	V : With lens	
	3 : Compact DOME	3 : -	3 :FHD	3 :	T : Long focal lens	
	2 : Dome	2 : Indoor Vandal	2 :	2 :	K : Fix lens	
	1 : Box	1 : Indoor normal	1 :HD	1 :		
	0 : -	0 : -	0 :-	0 :		

VIDEO INSIGHT LICENSE BUNDLED WITH PANASONIC CAMERAS MANUFACTURED AFTER OCTOBER 2014

Panasonic is bundling a Video Insight software license with the purchase of Panasonic cameras manufactured after October 2014 to save security professionals valuable time and money.

ELIGIBLE PANASONIC CAMERAS

PTZ Dome
SW598/SW598A, SW397A/SW397B, SW396/396A, SW395/395A, SC588/SC588A, SC387/SC387A, SC386, SC385, SC384, S6131, S6111, S6130, S6530N

Outdoor Vandal Fixed Dome
SFV781L, SFV631L/LT, SFV611L, SFV531, SW559, SW558, NW502S, SFV311, SFV310, SW355, SW352, SW158, SW155, SW155MA, SW152/152M, SW115, SFV110/M, SFV130/M, S2531LTN, S2531LN, 2511LN

Indoor Vandal Fixed Dome
SFR631L, SFR611L, SFR531, SF549, SF548 , SFR311, SFR310, SF346, SF342, S2231LN, S2211LN

Indoor Fixed Dome
SFN631L, SFN611L, SFN531, SF539, SF538, SFN311L, SFN311, SFN310, SF336, SF335, SF332, SF138, SF135, SF132, SFN110, SFN130, S2131L, S2111L, S2110

Outdoor Box
SPV781L, SPW631L/LT, SPW611L, SPW611, SW316L, SW316, SW314, SPW531AL, SPW311AL, S1531LTN, S1531LN, 1511LN

Indoor Box
SPN631, SPN611, SPN531, SP509, SP508, SPN311, SPN310, SP306, SP305, SP304V, SP302, SP105, SP102, S1111, S1311

360° Dome
SFV481, SFN480, SW458, SW458MA, SF448, SF438

PT Camera
SW175, SW174W, SW172, ST165, ST162, BL-VT164W, BL-VT164, BL-VP104W, BL-VP104, BL-VP101

Encoder
GXE500, GXE100

How to tell if your Panasonic camera was manufactured after October 2014:

1. Find the serial number on your camera and/or carton box.

2. The first letter of the serial number code indicates the year of production, where M=2013, N=2014, O=2015.

3. The second letter indicates the month of production, where A=January, B=February, C=March, etc.

For example, October 2014 will be NJ******.

For more information, visit:
us.panasonic.com/products-videosurveillance-videoinsight

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Transforming surveillance system solutions from concept to completion requires the utmost attention to detail throughout every phase of the process. You can trust Panasonic to be your single-source provider for all your facility's needs, from system design to installation to post-implementation support. Offering seamless integration, superior cost efficiency and increased ROI, we will configure your surveillance system to best fit your requirements and budget, while offering a fully integrated solution with the best third-party partners in the business. Plus, Panasonic's product warranty and service network ensure your system will continually perform to its highest expectations for years to follow.

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- System design
- Third-party integration
- Hardware and software
- Customer training

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- On-site / remote technical support

System Implementation with SI Partners

Post-implementation Support

- Extended warranties are available

Panasonic

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