Panasonic

NEW

i-PRO EXTREME H.265

EXTREME PERFORMANCE UNDER EXTREME CONDITIONS

VIDEO SURVEILLANCE CATALOG
SPRING 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.

Panasonic

i-PRO EXTREME
5 YEAR WARRANTY
PREFERRED

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.

VIDEOINSIGHT® 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

i-PRO EXTREME

Panasonic

INTRODUCING i-PRO EXTREME

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

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
H.265 | Smart Coding | INTELLIGENT FACIAL CODING
INDUSTRY STANDARD H.265 AND PANASONIC'S SMART CODING TECHNOLOGIES DELIVER THE HIGHEST QUALITY IMAGES AT THE LOWEST BITRATES

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
HDD DYNAMIC POWER CONTROL | NX400 Auto-Failover | 5 YEAR WARRANTY
NEW TECHNOLOGIES DELIVER LOW FAILURE RATES AND THE 5 YEAR i-PRO PREFERRED WARRANTY STANDS BEHIND PANASONIC'S HIGH RELIABILITY

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
SECURE Communication | Symantec Device Certificate
PANASONIC'S SECURE COMMUNICATION SUITE AND SYMANTEC'S DEVICE CERTIFICATION ENSURES ROBUST END-TO-END IP SECURITY
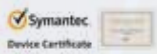
SECURE COMMUNICATION A PC-level security suite embedded in all new i-PRO Extreme Cameras, Recorders and Management Software enabling data and communications encryption
SYMANTEC CERTIFICATION Panasonic's has partnered with Symantec, the global leader in cybersecurity, to deploy their reliable Device Certificate 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` `HD`
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 270TB

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

i-PRO EXTREME H.265 SERIES LINE-UP

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 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
	Full HD	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	–	–
	HD	WV-S2110	Shipping	Yes	–	–	Yes	–	(E-D/N)	No	Mic	–	–	–
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
	Full HD	WV-S2531LN	Shipping	Yes	–	Yes	Yes	Yes	Yes	Yes	In/Out	Yes	Yes	Yes
	HD	WV-S2511LN	Shipping	Yes	–	–	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
Expansion Unit	WJ-HXE400	Shipping	HDD Expansion Unit for WJ-NX400
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

i-PRO EXTREME X-SERIES PTZ

Panasonic

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

WV-X6531

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.

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.
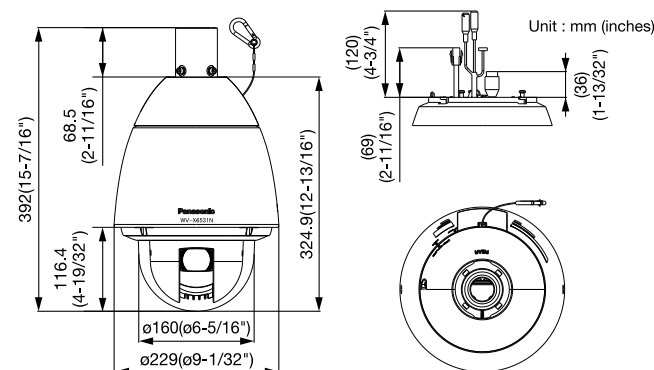
Key features of cameras include:

- 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

Camera	Image Sensor	Approx. 1/2.8 MOS image sensor
	Minimum Illumination	Color : 0.015 lx, BW : 0.006 lx (F1.6, Maximum shutter : Max. 1/30s, AGC : 11) Color : 0.001 lx, BW : 0.0004 lx (F1.6, Maximum shutter : Max. 16/30s, AGC : 11) *1
	Intelligent Auto	On / Off
	Shutter Speed	1/30 to 1/10000 *1/30 Fix to 2/100 Fix is available during 30 fps mode only. *2/120 Fix is available during 60 fps mode only.
	Super Dynamic*2	On / Off, the level can be set in the range of 0 to 31.
	Dynamic Range	144 dB (Super Dynamic : On)
	Image Settings	Gain (AGC), White balance
	Image Compensation	Adaptive black stretch, Back light compensation (BLC), Fog compensation, High light compensation (HLC), Digital noise reduction
	Day/Night (ICR)	Off / On / Auto1 (Normal) / Auto2 (IR Light) / Auto3 (SCC)
	Video Motion Detection	On / Off, 4 areas available
	Vehicle Incident Detection	Detect "Stopped Vehicle" and "Wrong-way" *optional plug-in software WV-XAE100W
	Image Stabilizer	On / Off (available only in the 30 fps mode)
	Privacy Zone	On / Off (up to 8 zones available)
	Camera Title (OSD)	On / Off Up to 20 characters (alphanumeric characters, marks)
Lens	Zoom Ratio	40x / 60x with HD extra optical zoom (at 1280 x 720)
	Digital (electronic) zoom	24x (Max 1440x combined with HD extra optical zoom at 1280 x 720)
	Focal length	4.25 mm – 170 mm (5/32 inches – 6-11/16 inches)
	Maximum Aperture Ratio	1:1.6 (WIDE) – 1:4.95 (TELE)
	Focus range	3.0 m (9ft 10-1/8 inches) – ∞
	Angular Field of view	[16 : 9 model] Horizontal: 2.1 ° (TELE) – 65 ° (WIDE) Vertical: 1.2 ° (TELE) – 39 ° (WIDE) [4 : 3 model] Horizontal: 1.6 ° (TELE) – 51 ° (WIDE) Vertical: 1.2 ° (TELE) – 39 ° (WIDE)
Pan/tilt	Panning Range	360° Endless panning
	Panning Speed	Manual: Approx. 0.065°/s – 120°/s Preset: Up to approx. 360°/s
	Tilting Range	Operational range: –15° – 195° (level – downward – level) Recommended range *1: 0° – 180° Selectable tilting angle: 10 °/ 5 °/ 3 °/ 0 °*3/ –3 °*3/ –5 °*3/ –10 °*3/ –15 °*3
	Tilting Speed	Manual: Approx. 0.065°/s – 120°/s Preset: Up to approx. 300°/s
	Preset Positions	256 positions
	Auto Mode	Auto track/ Auto pan/ Preset sequence/ Patrol
	Self Return	10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min/ 10 min/ 20 min/ 30 min/ 60 min
	Tilt flip	On / Off
Browser GUI	Camera Control	Pan/Tilt, Zoom, Focus, Auto mode, Brightness, Preset, AUX, Rec. on SD, Log, Vierwer software
	Audio	Mic (Line) Input : On / Off Volume adjustment : Low / Middle / High Audio Output : On / Off Volume adjustment : Low / Middle / High
	GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Network	Network IF	10Base-T / 100Base-TX, RJ45 connector
	Image Resolution	•2 mega pixel [16 : 9] (30/60 fps) 1920×1080, 1280×720, 640×360, 320×180 •3 mega pixel [4 : 3] (30 fps) 2048×1536`, 1280×960, 800×600, VGA, 400×300, QVGA *Used by super resolution techniques
H.265/	Transmission Mode	Constant bit rate / VBR / Framerate priority / Best effort
H.264*4	Transmission Type	Unicast / Multicast
JPEG	Image Quality	10 steps

Network	Smart Coding	Smart Facial Coding : On(Smart Facial Coding)/ On(AUTO VIQS)/ Off * Smart Facial Coding is only available with Stream(1). GOP(Group of pictures) control : On(Advanced)*/ On(Low)/ On(Mid)/ Off * On(Advanced) is only available with H.265.
	Audio Compression	G.726 (ADPCM) : 32 kbps / 16 kbps, G.711 : 64 kbps, AAC-LC*5 : 64 kbps / 96 kbps / 128 kbps
	Audio transmission mode	Off / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)
	Supported Protocol	IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, DiffServ, IEEE 802.1X IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, DiffServ, IEEE 802.1X
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
	SDXC/SDHC/SD Memory Card (Option)	H.265 / H.264 recording : Manual REC / Alarm REC (Pre/Post) / Schedule REC / Backup upon network failure JPEG recording : Manual REC / Alarm REC (Pre/Post) / Backup upon network failure Compatible SD (SDHC/SDXC) card : Panasonic 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64 GB**, 128 GB** 256 GB** model *SDHC card, ** SDXC card (except miniSD card and microSD card)
	Mobile Terminal Compatibility	iPad / iPhone (iOS 4.2.1 or later), Android™ mobile terminals
Alarm	Alarm Source	3 terminals input, VMD alarm, Command alarm, Audio detection alarm, Auto track alarm
	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, FTP image transfer, Panasonic protocol output
Input/ Output	Microphone/Line Input	ø3.5 mm stereo mini jack (Applicable microphone : Plug-in power type) Supply voltage : 2.5 V ±0.5 V
	Audio Output	ø3.5 mm stereo mini jack (monaural output) Output impedance : Approx. 600 Ω (unbalanced)
	External I/O Terminals	ALARM IN 1 (DAY/NIGHT IN, Auto time adjustment) (x1), ALARM IN 2 (ALARM OUT) (x1), ALARM IN 3 (AUX OUT) (x1)
General	Power Source and Power Consumption	AC24 V : 3.4 A, 55 W PoE+ : DC 54V 470 mA, 25 W (IEEE802.3at compliant) Tested POE Injector (60 W) : DC 54V 1.0 A, 50 W
	Ambient Operating Temperature	–50 °C to +60 °C {–58 °F to +140 °F} (AC 24 V/ Tested PoE injector (60 W)) –30 °C to +60 °C {–22 °F to +140 °F} (PoE+ device) {Power On range: –30 °C to +60 °C (–22 °F to +140 °F)}
	Ambient Operating Humidity	10 to 90 % (no condensation)
	Water and Dust Resistance	IP66 (IEC60529), Type 4X (UL50), NEMA 4X compliant
	Shock Resistance	IK10 (IEC62262)
	Dimensions	Maximum ø229 mm × 392 (H) mm {ø9-1/32 inches × 15-7/16 inches (H)}
	Mass (approx.)	Approx. 5.0 kg {11.02 lbs}
	Finish	Main body :Aluminum die cast, Natural silver Sunshields*6 :ABS+PC resin coating, Natural silver Outer fixing screws :SUS (Corrosion-resistant treatment) Dome cover :Polycarbonate resin (with ClearSight coating (rain wash coating)), Clear

*1 Converted value *2 Super Dynamic function is automatically set off on 60 fps mode. *3 If "0 °", "–3 °", "–5 °", "–10 °", or "–15 °" is selected, the area hidden by the camera housing may increase when the tilt angle of the camera is almost level. When "–15 °" is selected for "Tilt Angle", the upper half of images will be hidden. *4 Transmission for 4 streams can be individually set. *5 Only use AAC-LC (Advanced Audio Coding - Low Complexity) when recording audio on an SD memory card.

Appearance

Unit : mm (inches)

392(15-7/16")
68.5 (2-11/16")
116.4 (4-19/32")
324.9(12-13/16")
(120) (4-3/4")
(69) (2-11/16")
(36) (1-13/32")

ø160(ø6-5/16")
ø229(ø9-1/32")

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– Android is a trademark of Google Inc.
– ONVIF and the ONVIF logo are trademarks or registered trademarks of ONVIF Inc.
– All other trademarks identified herein are the property of their respective owners.

• Masses and dimensions are approximate.   • Specifications are subject to change without notice.

Optional Accessories

Ceiling Mount Bracket **WV-Q121B**	Wall Mount Bracket **WV-Q122A**

Plug-in Software for Vehicle Incident Detection
WV-XAE100W
Camera detects vehicle incidents happened on the road with video analytics.

Target Incident	Wrong-way / Stopped vehicle
Number of Lanes	Max. 4 lanes
Detection scene	Max. 256 preset positions

Important
– Safety Precaution : Carefully read the Important Information, Installation Guide and operating instructions before using this product.
– Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

PRELIMINARY

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 80% 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

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

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

INTEGRATED WITH SMART CODING
Advanced compression technology that reduces bandwidth up to 80% without sacrificing video quality

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

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

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

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

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

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

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

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.

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.

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

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

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.

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

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.
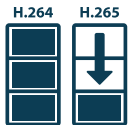
UI Customization Made Simple
There's a major change in UI framework - new technology that allows greater flexibility with UI customization, graphics, as well as clear separation between UI and application logic.

GPU Friendly
Leverage GPU supported video card to assist processing video images, freeing up resources for the server's CPU for other tasks. Improve IP Server performance for environments with high resolution and camera counts. VI MonitorPlus provides enhanced scalability, lowering total cost of ownership.

Enhanced Timeline
New floating timeline with unique colors helps identify motion apart from general recordings making locating and retrieving evidence quicker and easier.

Improved Optimization Settings
VI MonitorPlus's extensive library options are optimized for quicker access to the most important things.

H.265/ HEVC Compatible
H.265 is supported for Live Video Streaming, Playback, Clipping and Snapshot creations. The newly developed video compression format improves performance by reducing bandwidth and data storage. Customers can now benefit from improved efficiency in bandwidth and storage without sacrificing image quality.

Plug-In Ready
Additional features can be installed to VI MonitorPlus for a specific vertical market that would allow users to expand the functionality of the video surveillance system. These features include Point of Sale, GPS Geolocation, FacePro Analytics plug-ins plus many more.

VI MonitorPlus – Faster. More powerful than ever.

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

Retrieve evidence quicker

| 1am | 2am | 3am | 4am | 5am | 6am | 7am | 8am | 9am | 10am | 11am | 12pm | 1pm |

Identify motion in the recording

Component	Minimum	Recommended
Processor	12.0 GHz dual-core	12.4 GHz quad-core
Memory	4 GB	8 GB+
Video	256 MB	1 GB
Network	100 Mb/s	1 Gb/s+
Display Resolution	1600x900	1920x1080 or higher

What's new in this release:

New Client UI

H.264 H.265
Full Support H.265

GPU Hardware Acceleration

Plug-In Ready*
For example:
• Point of Sale add-on
• GPS Geolocation add-on
• FacePro Analytics
• And more

For more information contact us at (713) 621.9779
or visit: www.videoinsight.com

VIDEOINSIGHT®
A Panasonic Company

DELIVERING SHARPER IMAGES WITH HIGHER SENSITIVITY

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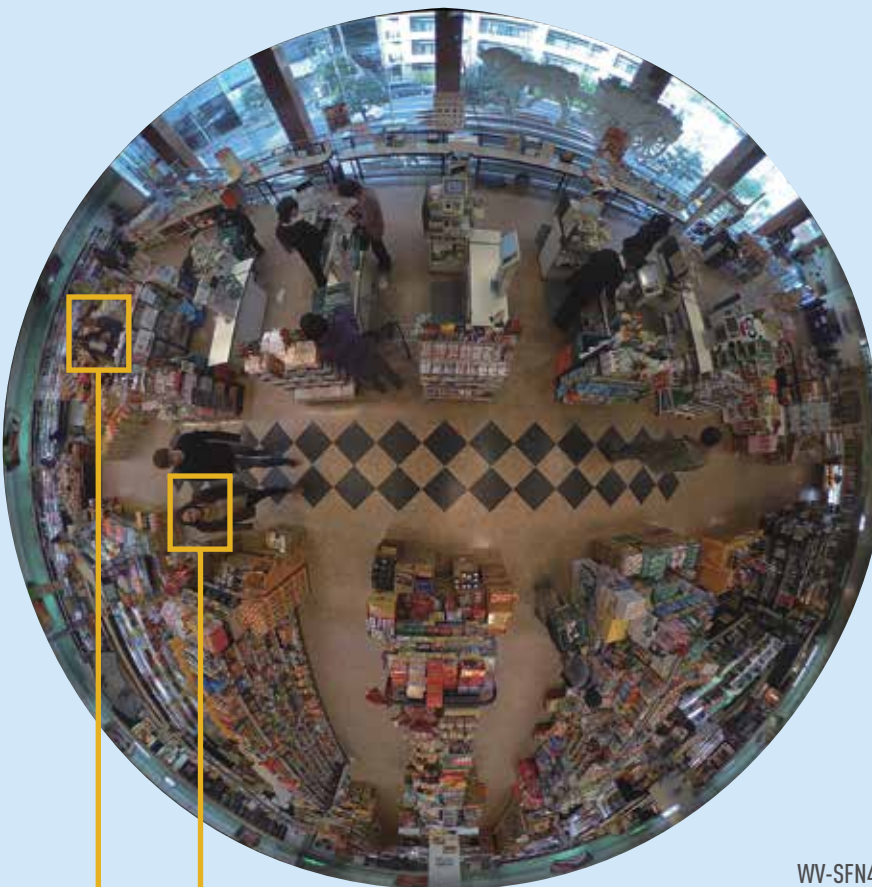
ULTRA **360**
4K ENGINE

WV-SFN480
360-degree Indoor Dome
9 Megapixel Network Camera

WV-SFV481
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
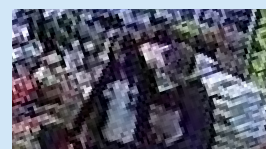
NOW WITH SMART CODING

UP TO **75%**
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.
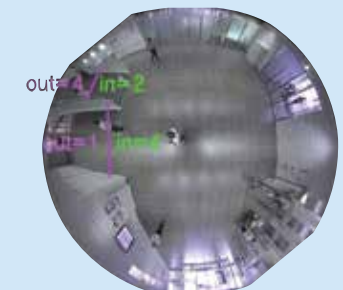
MOVING OBJECT REMOVAL (MOR)

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.

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.

Panasonic

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
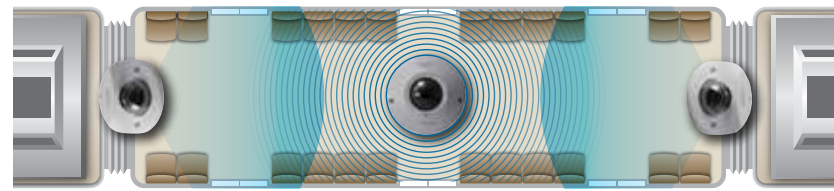
IN BUSES
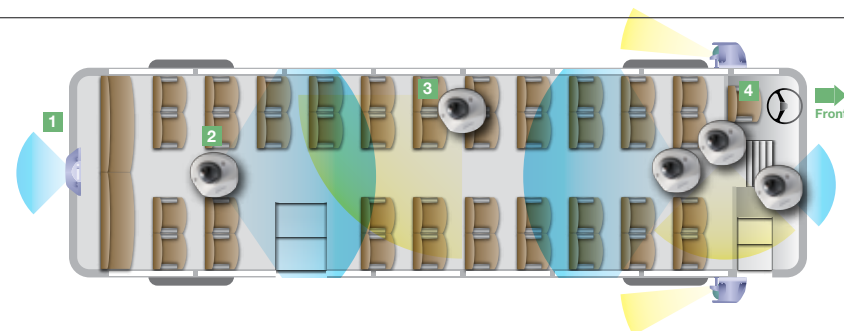
Wide Coverage without Blind Spots
The application of rain-wash coating to the dome cover provides clearer visibility, allowing good security to be maintained even when the camera is installed in an environment subject to rain or water splashing. In addition, the coating resists attachment of dirt to 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

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-SW458MA
- 360° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad PTZ, Single PTZ, and Quad streams (H.264/VGA)
- 1080p Full HD images up to 30 fps
- 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.

Panasonic

WV-ASF900W—FacePro™

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.

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.

- 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-SP306, WV-SP305 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

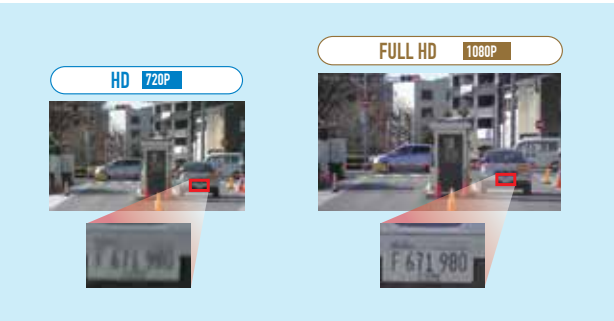- Ideal for Panasonic customers who have either WJ-ND400 or WJ-NV200/300 NVR

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

HIGH PICTURE QUALITY, HIGH SENSITIVITY

Providing natural looking, sharp video optimized for a wide range of installation environments and conditions.
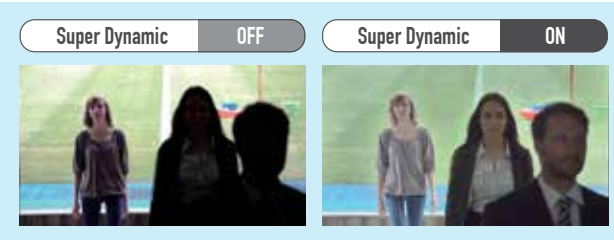
HIGH RESOLUTION

The Panasonic i-PRO SmartHD Series of network cameras are high definition (HD) cameras capable of shooting video at Full HD (1,920x1,080) and HD (1280x720). These cameras can record up to 60 images per second (60 fps), even at Full HD resolutions for the capture of exceptionally clear images of moving objects. The resolution, frame rate, and other parameters can be adjusted for the installation location and subject for obtaining the optimum settings for your specific environment.

HD 720P | FULL HD 1080P

Smart DoF (Depth of Field)

The i-PRO SmartHD Series cameras are ideal for shooting in locations with depth. When recording areas with depth, such as straight passageways or wide spaces, the optimum image can be captured with focal points simultaneously at both the near and far ends of the image.

Smart DoF (Depth of Field)

ENHANCED SUPER DYNAMIC

SD ENHANCED Super Dynamic

In installation environments with differences in brightness, the Super Dynamic (SD) function brightens dim areas with low visibility and reduces the brightness of areas where blown-out highlights can occur due to over-brightness, providing a natural image that is easy to view. In building entrances and similar locations, this enables the capturing of sharp images of people's faces as they enter from the outside when exposed to direct sunlight.

With the Super Dynamic (SD) function, the camera can be installed without worrying about lighting conditions that vary based on the time of day and season.

Super Dynamic OFF | Super Dynamic ON

0 LUX PITCH DARK LOCATIONS

IR LED

Cameras with a **Smart IR LED** can be used to monitor environments that are completely dark. This enables areas without the level of illumination required to be monitored to prevent graffiti, illegal dumping, and property destruction.

Smart IR LED can illuminate a wide area so that monitoring is not limited to a specific part of the image. The built-in IR LED of the 6 Series can capture subjects up to 30 meters away. Light levels are automatically adjusted for blown out highlights and screen whitening when the IR LED shines on a subject close-by, making the right areas highly visible.

The IR LED is covered to make it difficult to detect from the outside or to know which way the lens is pointing.

Smart IR LED OFF | Smart IR LED ON

DAY/NIGHT AUTOMATIC MODE SWITCHING

day/night ICR | day/night

In stores, warehouses, and other locations where it is bright during the day but dark at night, the camera can automatically determine the brightness of the area and record video under the optimum conditions. During nighttime hours, the camera automatically switches to black-and-white video for providing footage with high visibility.
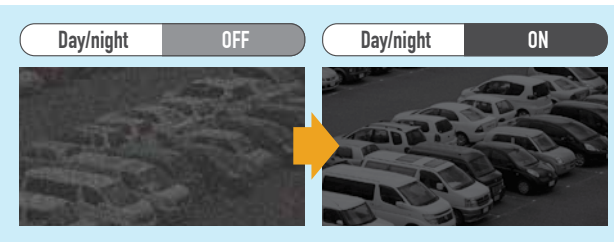
Day/night OFF | Day/night ON

STRONG LOW LIGHT PERFORMANCE IN COLOR

Monitoring is possible even in dim locations.
Panasonic's proprietary technology enables high-sensitivity shooting that enables distinguishing of color hues even in dimly-lit locations.

Normal shooting | Shooting in dim location (0.2 lx)

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

IMAGE COMPENSATION

FOG / SANDSTORM COMPENSATION

Fog sand Compensation

A full array of features are provided for optimum shooting in fog, sandstorms, and other hazy environments.
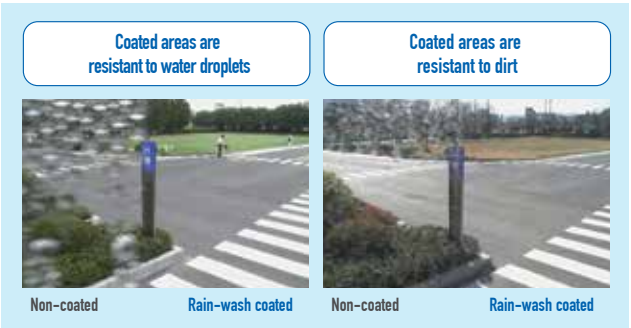Haziness due to fog or a sandstorm is automatically removed by this function providing clear, sharp video footage.

Fog

Before Correction | After Correction

Sandstorm

Before Correction | After Correction
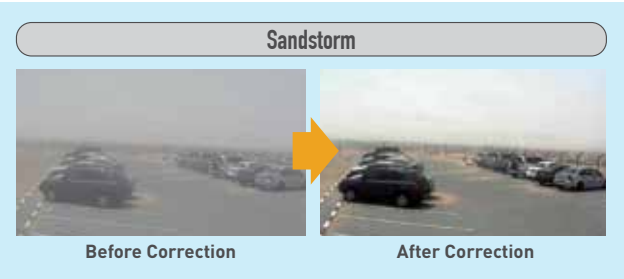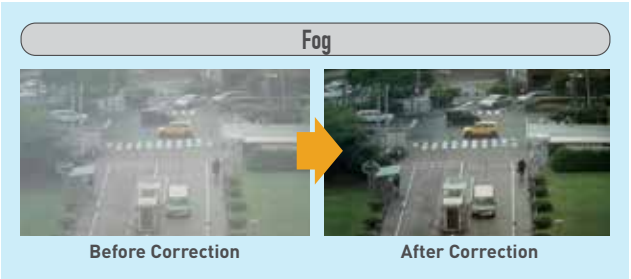
VISIBILITY ENHANCEMENT COATING

RAIN WASH COATING

Water droplets from rain can adhere to the dome cover of the camera and hinder the shooting of clear images.
In our Rain-wash coated models, a special coating is applied so that water droplets are repelled allowing clear images to be recorded even during rainfall. This coating is also effective at repelling dirt so that cleaning of the dome cover is required less frequently.

* WV-SFV781L / WV-SPV781L / WV-SW598 / WV-SW397A / WV-SW396A / WV-SW395A

Coated areas are resistant to water droplets | Coated areas are resistant to dirt

Non-coated | Rain-wash coated | Non-coated | Rain-wash coated

HIGH LIGHT COMPENSATION

HLC

For cameras installed at locations along roads or at entrances and exits to parking lots, the glare of headlights and other strong light sources shining into the camera lens can prevent the reading of license plates and surrounding areas.
Enabling the HLC (High light compensation) function reduces the brightness of strong light sources and enhances the surrounding areas for optimum video recording.

HLC OFF | HLC ON

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

Panasonic

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
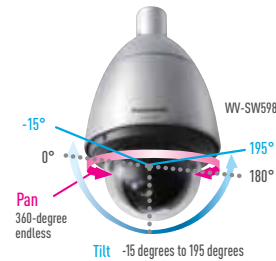
Preset Position / Preset Sequences

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.
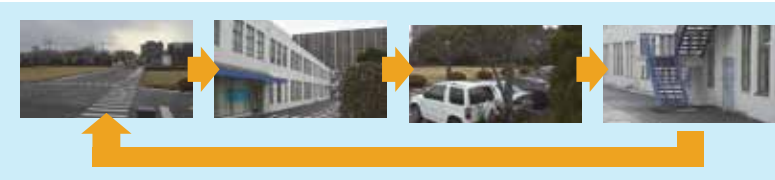
Advanced Auto Tracking

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.

*Supported functions and specifications differ according to the models. See the specifications for each model.
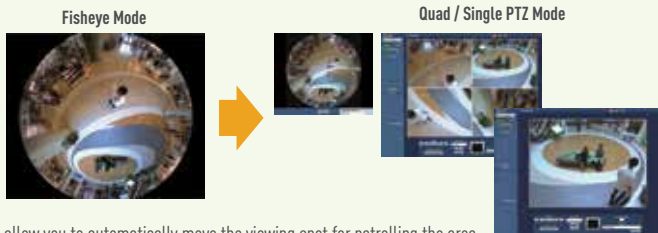
SUPPORT FOR VARIOUS INSTALLATION ENVIRONMENTS

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.
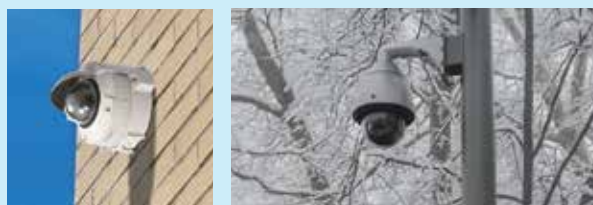
DEHUMIDIFICATION DEVICE

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.

NO HUMIDIFICATION

DEHUMIDIFIER
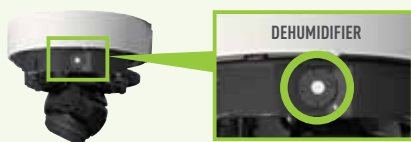
Vandal Resistant

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.

Panasonic

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.
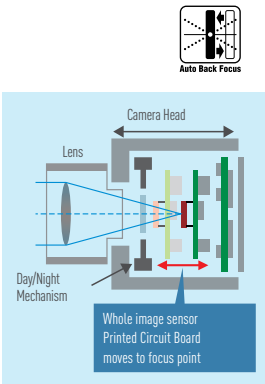
Camera Head
Lens
Day/Night Mechanism
Whole image sensor Printed Circuit Board moves to focus point

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.

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

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
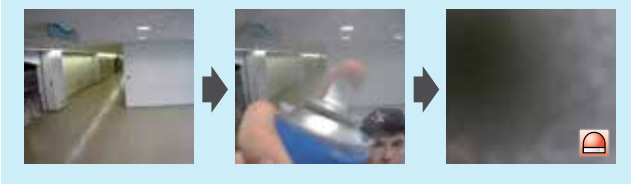
LOITERING DETECTION
Objects staying longer than a specified time

Detection Area | Detection Area

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

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.
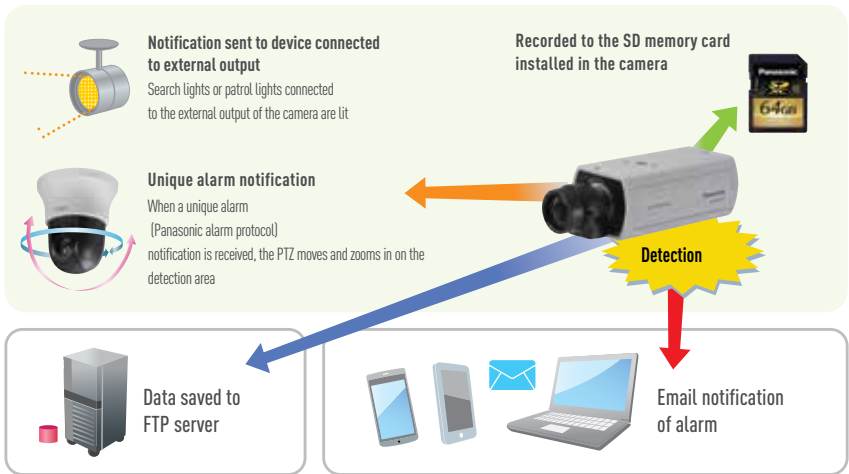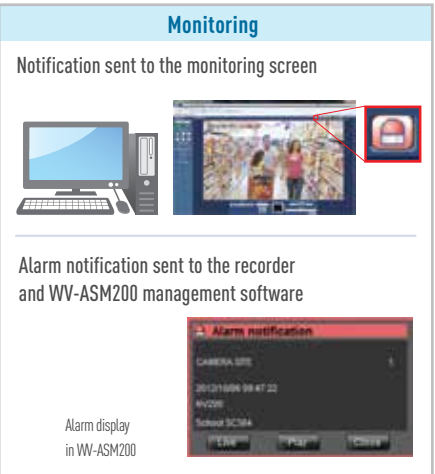
CROSS LINE DETECTION *2
A person who crosses the virtual line to the specified direction

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 notification
CAMERA SITE
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

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

Recorded to the SD memory card installed in the camera

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

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CAMERA TYPE		PAN TILT ZOOM		
Appearance		WV-SUD638 HD1080P (NEW, Available September 2016)	WV-SW598A HD1080P	WV-SW397B 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	2	2
	JPEG multi stream	6 (Variable)	6	6
	Smart Coding	—	—	—
Max. Resolution	16 : 9	1920 x 1080	1920 x 1080	1280 x 720
	4 : 3	1280 x 960	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.264	60 fps (1080p)	30 fps (1080p)	30 fps (2.4 MP)
	JPEG	60 fps (1080p)	30 fps (1080p)	30 fps (2.4 MP)
Super Dynamic / WDR / BLC		Super-D	Super-D	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	0.06 lx @F1.6	0.15 lx @F1.6	0.3 lx @F1.6
	Color (Sens up)	0.004 lx (16x)	0.009 lx (16x)	0.019 lx (16x)
	B/W	0.0 lx @F1.6 (w/IR)	0.018 lx @F1.6	0.04 lx @F1.6
	B/W (Sens up)	—	0.001 lx (16x)	0.003 lx (16x)
Lens		f= 4.3 to 129 mm, F1.6	f= 4.3 to 129 mm, F1.6	f= 4.3 to 129 mm, F1.6
Angular field of view	16 : 9	H: 2.3 to 64 deg. / V: 1.3 to 38 deg.	H: 2.6 to 64.6 deg. / V: 1.6 to 38.2 deg.	H: 2.6 to 64.6 deg. / V: 1.6 to 38.2 deg.
	4 : 3	H: 1.8 to 50 deg. / V: 1.3 to 38 deg.	H: 1.4 to 44.4 deg. / V: 1.1 to 33.8 deg.	H: 1.4 to 44.4 deg. / V: 1.1 to 33.8 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
360 Pan-Flip		—	—	—
Number of Preset Positions		256	256	256
Patrol		Yes	Yes	Yes
Auto Tracking		Yes	Yes (advanced)	Yes (advanced)
Optical Zoom		30x	30x	30x (45x with Extra Zoom at HD)
Digital Zoom		12x	12x	12x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	—	—
VIQS		Yes (8-areas)	Yes (2-areas)	Yes (2-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 (*2)	G.711 / G.726 / AAC (*2)
	Audio Detection Alarm	Yes	Yes	Yes
SD memory Card	Slot	—	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	—	—	—
	Audio REC	—	Yes	Yes
External I/O		Yes (3) (*4)	Yes (3) (*3)	Yes (3) (*3)
Monitor Out		—	Yes (Composite)	Yes (Composite)
Vandal Resistant		20J, IK10	20J, IK10	20J, IK10
Water and Dust Resistance		IP67 / IP66 / NEMA 4X	IP66 / NEMA 4	IP66
Temperature		-58°F to +140°F	-58°F to +131°F (24 V / 60 W PoE) (*4) -22°F to +131°F (PoE+)	-58°F to +131°F (24 V) -22°F to +131°F (PoE+)
Power Source		AC100 to 240V / 60W Injector	24 V AC / PoE+	24 V AC / PoE+
Dehumidification device		Yes	Yes	Yes
Other Functions		Onvif S, Built-in wiper, Defloster	Onvif S/G, Built-in heater, Rain wash coating, Auto Eyelid Mechanism	Onvif S/G, Built-in heater, Auto Eyelid Mechanism, Rain wash coating (WV-SW397A)
Mounting Options		See page 60	See page 59, 60	See page 59, 60

(*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

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CAMERA TYPE		PAN TILT ZOOM		
Appearance		WV-SW395A HD720P	WV-SC588A HD1080P	WV-SC387A HD720P
Sensor		1/3 MOS	1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / MPEG-4 / JPEG	H.264 / JPEG	H.264 / JPEG
	H.264 multi stream	2	2	2
	JPEG multi stream	6	6	6
	Smart Coding	—	—	—
Max. Resolution	16 : 9	1280 x 720	1920 x 1080	1280 x 720
	4 : 3	1280 x 960	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.264	30 fps (1.3 MP)	30 fps (1080p)	30 fps (2.4 MP)
	JPEG	30 fps (1.3 MP)	30 fps (1080p)	30 fps (2.4 MP)
Super Dynamic / WDR / BLC		Super-D	Super-D	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	0.5 lx @F1.6	0.3 lx @F1.6
	Color (Sens up)	0.03 lx (16x)	0.03 lx (16x)	0.019 lx (16x)
	B/W	0.06 lx @F1.6	0.06 lx @F1.6	0.04 lx @F1.6
	B/W (Sens up)	0.004 lx (16x)	0.004 lx (16x)	0.003 lx (16x)
Lens		f= 4.7 to 84.6 mm, F1.6	f= 4.3 to 129 mm, F1.6	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: 2.34 to 65.1 deg. / V: 1.36 to 38.4 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: 1.6 to 45.2 deg. / V: 1.2 to 34.3 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
360 Pan-Flip		Yes	—	—
Number of Preset Positions		64	256	256
Patrol		—	Yes	Yes
Auto Tracking		Yes	Yes (advanced)	Yes (advanced)
Optical Zoom		18x	30x	30x (45x with Extra Zoom at HD)
Digital Zoom		12x	12x	12x
VMD (Video Motion Detection)		Yes (4-areas)	Yes (4-areas)	Yes (4-areas)
i-VMD (Intelligent VMD) (w/extension software)		—	—	—
VIQS		—	Yes (2-areas)	Yes (2-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	G.711 / G.726 / AAC (*1)	G.711 / G.726 / AAC (*1)
	Audio Detection Alarm	—	Yes	Yes
SD memory Card	Slot	Yes (SDHC)	Yes (SDXC)	Yes (SDXC)
	Password & Alter Detection	—	—	—
	Audio REC	—	Yes	Yes
External I/O		Yes (3) (*3)	Yes (3) (*2)	Yes (3) (*2)
Monitor Out		Yes (Composite)	Yes (Mini-jack)	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 +131°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)	Onvif S/G, Dome less	Onvif S/G, Dome less
Mounting Options		See page 59, 60	See pages 57, 58	See pages 57, 58

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

Panasonic

PAN TILT ZOOM

CAMERA TYPE		WV-SC385 HD720P	WV-SC384 HD720P
Appearance			
Sensor		1/3 MOS	1/3 MOS
Codec and Transmission	Video Codec	H.264 / MPEG-4 / JPEG	H.264 / MPEG-4 / JPEG
	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.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
360 Pan-Flip		Yes	Yes
Number of Preset Positions		64	64
Patrol		—	—
Auto Tracking		Yes	—
Optical Zoom		18x	18x
Digital Zoom		12x	8x
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)	Yes	Yes
	In (Built-in MIC)	—	—
	Out	Yes	Yes
	Codec	G.711 / G.726	G.711 / G.726
	Audio Detection Alarm	—	—
SD memory Card	Slot	Yes (SDHC)	Yes (SDHC)
	Password & 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 pages 57, 58	See pages 57, 58

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

H.265 FIXED DOME

CAMERA TYPE		NEW WV-S2531LTN HD1080P	NEW WV-S2531LN HD1080P	NEW WV-S2511LN HD720P	NEW WV-S2231L HD1080P
Appearance					
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 Format		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)
	Password & 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 to +60 deg. (*4)	-40 to +60 deg. (*4)	-40 to +60 deg. (*4)	-10 to +50 deg.
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 55, 56	See page 55, 56	See page 55, 56	See page 54, 55

(*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		WV-S2211L HD720P (NEW)	WV-S2131L HD1080P (NEW)	WV-S2111L HD720P (NEW)	WV-S2110 HD720P (NEW)
Appearance					
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 (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 Format		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)	—
	Password & 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		-10 to +50 deg.	-10 to +50 deg.	-10 to +50 deg.	-10 to +50 deg.
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 54, 55	See page 54, 55	See page 54, 55	See page 54, 55

(*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		WV-SFV781L 4K Engine	WV-SFV631LT HD1080P	WV-SFV631L HD1080P	WV-SFV611L HD720P	WV-SFV531 HD1080P
Appearance						
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 56	See pages 55, 56	See pages 55, 56	See pages 55, 56	See pages 55, 56

(*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)

FIXED DOME (left)

CAMERA TYPE		WV-SFV311A HD720P	WV-SFV310A HD720P	WV-SFV130/WV-SFV130M (*5) HD1080P	WV-SFV110/WV-SFV110M(*5) HD720P
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 55, 56	See pages 55, 56		

(*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

FIXED DOME (right)

CAMERA TYPE		WV-SBV131M (*4) HD1080P	WV-SBV111M (*4) HD720P	WV-SW115 HD720P	WV-SFR631L HD1080P	WV-SFR611L HD720P
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 54, 55	See pages 54, 55

(*1): w/Super resolution (*2): Alarm In1(DayNight 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

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 54, 55	See pages 54, 55	See pages 54, 55	See pages 54, 55

(*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)

CAMERA TYPE		FIXED DOME		
Appearance		**WV-SFN611L** HD1080P	**WV-SFN531** HD1080P	**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 66.0 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 54, 55	See pages 54, 55	See pages 54, 55

(*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)

Panasonic

FIXED DOME

CAMERA TYPE		WV-SFN310A HD720P	WV-SFN130 HD1080P	WV-SFN110 HD720P
Appearance				
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 54, 55		

(*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		WV-SFV481 4K Engine	WV-SW458/SW458MA(*1) HD1080P	WV-SFN480 4K Engine	WV-SF448 HD1080P	WV-SF438 HD1080P
Appearance						
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 55, 56	See pages 55, 56			

(*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)

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 Format		Yes	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)
	Password & 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 to +60 deg. (*4)	-40 to +60 deg. (*4)	-40 to +60 deg. (*4)	-10 to +50 deg.	-10 to +50 deg.
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 61	See page 61	See page 61	See page 61	See page 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.

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 61	See page 61	See page 61	See page 61

(*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

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) (*4)	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 61	See page 61	See page 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

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 61	See page 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

BOX / CYLINDER

CAMERA TYPE		WV-SPN531A HD1080P	WV-SPN311A HD720P	WV-SPN310A HD720P	WV-SP105 HD720P
Appearance		Lens not included	Lens not included	Lens not included	
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	2
	JPEG multi stream	6 (Variable)	6 (Variable)	6 (Variable)	6
	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	1280 x 720
	4 : 3	2048 x 1536	1280 x 960	1280 x 960	1280 x 960
Max. FPS @Max. Resolution	H.264	60fps (1080p)	60fps (720p)	60fps (720p)	30fps (1.3 MP)
	JPEG	30fps (3 MP)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD	BLC
Day/Night		Yes (ICR)	Yes (ICR)	Yes (Electrical)	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	0.8 lx @F2.2
	Color (Sens up)	0.003 lx (16x)	0.0007 lx (16x)	0.0007 lx (16x)	0.05 lx (16x)
	B/W	0.01 lx @F1.4	0.003 lx @F1.4	0.008 lx @F1.4	0.4 lx @F2.2
	B/W (Sens up)	0.0007 lx (16x)	0.0002 lx (16x)	0.0005 lx (16x)	0.03 lx (16x)
Lens		CS Mount	CS Mount	CS Mount	f= 3.54 mm, F2.2
Angular field of view	16 : 9	—	—	—	H: 70.3 deg. V: 42.6 deg.
	4 : 3	—	—	—	H: 70.3 deg. V: 55.4 deg.
Adjusting Angle	Pan	—	—	—	—
	Tilt	—	—	—	—
Optical Zoom		—	—	—	—
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 (1-area)
Max. Connection		14	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	+32°F to +104°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/G	Onvif S/G	Onvif S
Mounting Options		See page 61	See page 61	See page 61	See page 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)

PAN / TILT

CAMERA TYPE		WV-SW175 HD720P	WV-SW174W HD720P	WV-SW172 VGA	WV-ST165 HD720P	WV-ST162 VGA
Appearance						
Sensor		1/4 MOS	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 / JPEG
	H.264 multi stream	2	2	2	2	2
	JPEG multi stream	6	6	6	6	6
	Smart Coding	—	—	—	—	—
Max. Resolution	16 : 9	1280 x 720	1280 x 720	640 x 360	1280 x 720	640 x 360
	4 : 3	1280 x 960	1280 x 960	800 x 600	1280 x 960	800 x 600
Max. FPS @Max. Resolution	H.264	30fps (1.3 MP)	30fps (1.3 MP)	30fps (SVGA)	30fps (1.3 MP)	30fps (SVGA)
	JPEG	30fps (1.3 MP)	30fps (1.3 MP)	30fps (SVGA)	30fps (1.3 MP)	30fps (SVGA)
Super Dynamic / WDR / BLC		BLC	BLC	BLC	BLC	BLC
Day/Night		Yes (Electrical)	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	0.6 lx @F2.2
	Color (Sens up)	0.038 lx (16x)	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	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)	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	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.	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.	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.	-47.5 to +47.5 deg.
	Speed	80 deg/sec	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.	-45 to +10 deg.
	Speed	80 deg/sec	80 deg/sec	80 deg/sec	80 deg/sec	80 deg/sec
360 Pan-Flip		—	—	—	—	—
Number of Preset Positions		64	64	64	64	64
Patrol		—	—	—	—	—
Auto Tracking		—	—	—	—	—
Optical Zoom		—	—	—	—	—
Digital Zoom		16x	16x	16x	16x	16x
VMD (Video Motion Detection)		Yes	Yes	Yes	Yes	Yes
i-VMD (Intelligent VMD) (w/extension software)		—	—	—	—	—
VIQS		—	—	—	—	—
Max. Connection		14	14	14	14	14
Audio	In (Line)	Yes	Yes	Yes	Yes	Yes
	In (Built-in MIC)	Yes	Yes	Yes	Yes	Yes
	Out	Yes	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726	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	Yes
	Password & Alter Detection	—	—	—	—	—
	Audio REC	—	—	—	—	—
External I/O		Yes (3) (*1)	Yes (3) (*1)	Yes (3) (*1)	Yes (3) (*1)	Yes (3) (*1)
Monitor Out		Yes	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	+32°F to +104°F
Power Source		12 V DC / PoE	12 V DC	12 V DC / PoE	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	Onvif S
Mounting Options						

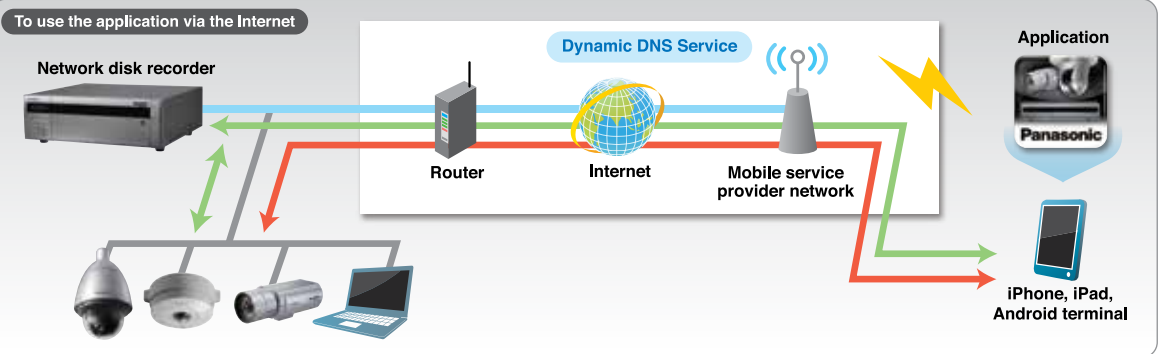(*1) : Alarm In1, Alarm In2(Alarm Out), Alarm In3(AUX Out) (x1 for each)

Panasonic Security Viewer App VERSION 2.2

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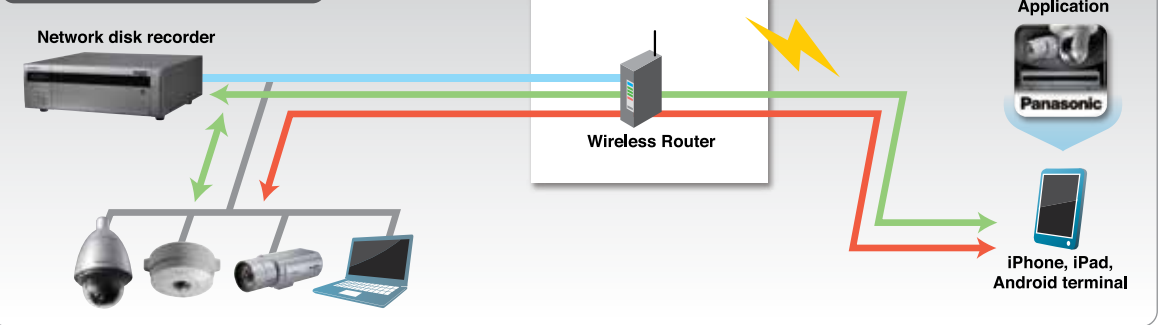
By connecting a terminal to a 3G/4G or wireless LAN (Wi-Fi), it is possible to view live images from cameras and recorded images stored on recorders.

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

Panasonic

Router   Internet   Mobile service provider network

iPhone, iPad, Android terminal

To use the application in a local network

Network disk recorder

Application

Panasonic

Wireless Router

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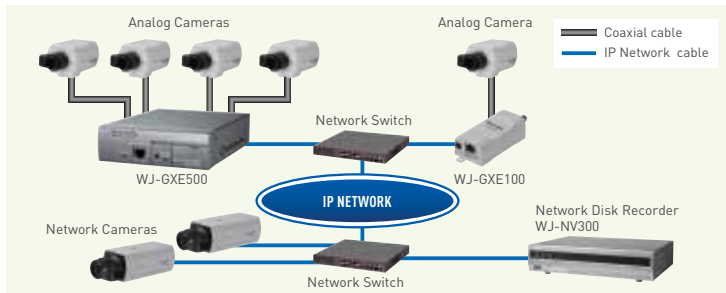
4 CH H.264 Video Encoder
WJ-GXE500
(12 V DC or PoE)

Optional Accessory

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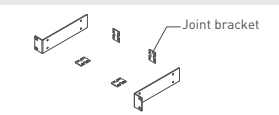
1 CH H.264 Video Encoder
WJ-GXE100
(12 V DC or PoE)

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
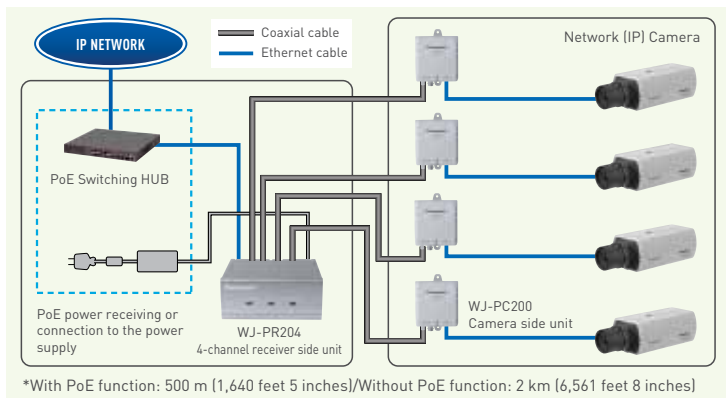
*With PoE function: 500 m (1,640 feet 5 inches)/Without PoE function: 2 km (6,561 feet 8 inches)

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

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

Camera side unit
WJ-PC200

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)

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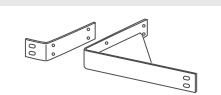
EIA 48.26 cm (19 inch) Rack Mount Bracket
WV-Q204/2S
(for mounting two WJ-GXD400)   Joint bracket
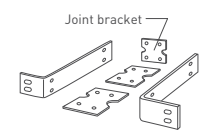
*Only 3 pieces of joint brackets are necessary. One piece of joint bracket will be unnecessary.

Panasonic

Turbo-RAID Network Disk Recorder
WJ-NX400
(120 V AC: NTSC, 220-240 V AC: PAL)

H.265

- 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

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

Dimensions   430 mm (W) x 132 mm (H) x 400 mm (D)
[16-15/16" (W) x 5-3/16" (H) x 15-12/16" (D)]
(excluding rubber feet and projections)

Weight   11 kg (24.3 lbs.) (When no HDD exist)
29.5 kg (43 lbs.) (When 9 HDDs are installed)

Network Disk Recorder
WJ-ND400
(120 V AC: NTSC, 220-240 V AC: PAL)

- H.264,MPEG-4 and JPEG multi format
- Up to 64 network cameras can be connected and recorded (Video and Audio)
- Various Recording Mode: Manual, Schedule including Event (Pre/Post), Emergency
- VMD search (works with i-PRO cameras or WJ-NT314)
- Up to 54 HDD slots with 9 HDD slots in the main unit and five WJ-HDE400 optional Extension Units each with 9 HDD slots
- RAID5/6, Embedded OS, Data encryption for reliability
- Optional HDD: 6TB HDD Canister/6000; 4TB HDD Canister/4000; 3TB HDD Canister/3000; 2TB HDD Canister/2000

Optional Accessory

Hard Disk Extension Unit
WJ-HDE400

6TB HDD Canister/6000   4TB HDD Canister/4000   3TB HDD Canister/3000

Network Disk Recorder
WJ-NV300
(120 V AC: NTSC, 220 V -240 V AC: PAL)

- H.264 and JPEG multi format
- 16(NTSC) / 9(PAL) network cameras can be connected and recorded as default. Up to 32 *1 network cameras can be connected and recorded.
- Quick setup by automatic camera detection and simple setup wizard without the use of PC
- Simple mouse operation by new GUI without the use of PC
- Supports the Full HD output (HDMI)
- HDD capacity is expandable up to 20 HDD slots (2 HDD slots in the main unit and 2 optional WJ-HDE400 Hard Disk Extension Units each with 9 HDD slots).
- Supports 360-degree network microphone (WV-SMR10)

*1 Two Additional Camera Kits WJ-NVE30 are necessary.(NTSC) Three Additional Camera Kits WJ-NVE30 are necessary.(PAL)

Additional Camera kit : **WJ-NVE30**

Optional Accessory

Hard Disk Extension Unit
WJ-HDE400

Power Source   : 220 – 240 V AC, 50 Hz (PAL)
120 V AC, 60 Hz (NTSC)
Power Consumption : approx. 130 W
Dimensions   : 430 mm (W) x 132 mm (H) x 400 mm (D)
[16-15/16" (W) x 5-3/16" (H) x 15-12/16" (D)]
(excluding rubber feet and projections)
Weight   : 13.5 kg (29.8 lbs.) (When no HDD exist)
20 kg (44.15 lbs.) (When 9 HDDs are installed)

NTSC model

Easy Operation and Setup without PC

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

Speaker with amplifier

Network Cameras × Max.32

PC
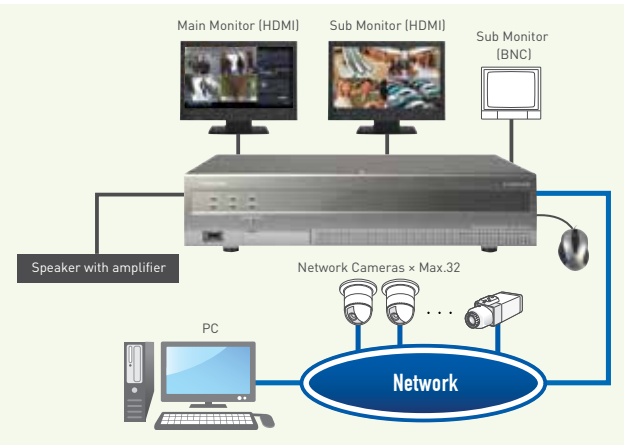
Network

Additional Business Intelligence Kit **WJ-NVF30**

Additional Business Intelligence Kit NVF20 is a license kit intended to improve the usefulness of Network Disk Recorder WJ-NV300 / WJ-NV200.

WJ-NV300

- **New statistical processing functions such as "People counting" and "Face matching / Age & Gender judgment"**
- The number of detected human faces can be displayed on a statistical chart separated by age & gender for a single day or a specified time period.
- Age distribution groups are displayed by separate colors.
- The statistical data can be saved as a CSV file on a SDHC/SD memory card or on a PC connected over a network.
 ＊ CSV file: A file that can be edited using a spreadsheet software such as Microsoft ® Office Excel ®

＊ To use this product, it is necessary to register the license (Registration Key) for Additional Business Intelligence Kit into the WJ-NV300/WJ-NV200 in use.

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.

PMPU3000 `VERSION 17`

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

WV-ASM970W `VERSION 17`

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.

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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
- Controlling Video Insight server

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

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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

PTZ

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	

DOME

CAMERA TYPE		DOME		
Indoor / Outdoor		OUTDOOR	INDOOR	
Appearance		NEW 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

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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	

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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

WJ-HD716 (120V AC: NTSC)

16 CH REAL-TIME H.264 DIGITAL DISK RECORDER

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
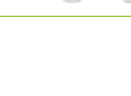
WV-CU650

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

Panasonic

CAMERA ACCESSORIES

MODEL	DESCRIPTION/TYPE	COMPATIBILITY	IMAGE
WV-CF5SA	Smoke Dome	WV-SFN631L/611L, WV-SFN310A/311A, WV-SFN531, WVS2110/S2111L/S2131L	
WV-CS4S	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

			CAMERA TYPE					
			OUTDOOR VANDAL			INDOOR DOME		
MODEL NO.	PICTURE	DESCRIPTION/TYPE	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-SFV631L/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			

HOUSING AND MOUNTING BRACKETS FOR DOME CAMERAS (CONT.)

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE					
			OUTDOOR VANDAL			INDOOR DOME		
			WV-S2531LT-N/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-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-SC384/WV-SC385	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	
WV-Q154S		Indoor/Wall Wall Mount Bracket— Smoke Dome		Yes	
WV-Q155C		Indoor/Ceiling Embedded Ceiling Mount Bracket—Clear Dome		Yes	
WV-Q155S		Indoor/Ceiling Embedded Ceiling Mount Bracket—Smoke Dome		Yes	
WV-Q156C		Indoor/Ceiling Ceiling Mount Bracket— Clear Dome		Yes	
WV-Q156S		Indoor/Ceiling Ceiling Mount Bracket— Smoke Dome		Yes	
WV-Q157		Inner Dome Cover		Yes	
PISM5V		Indoor/Pendant/Clear 5" Indoor Vandalresistant Housing		Yes	
PIDV7CN		Indoor/Ceiling/Vandal 7" Indoor Recessed Ceiling Housing with Clear Dome	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/WV-SC387A	WV-SC384/WV-SC385	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-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

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

MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE			
			PTZ			
			WV-SW598A/ WV-SW397B	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	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				

Panasonic

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
1/3"	PLAMP2206		Fujinon	2.2~6.0	F1.3	Yes	No	Yes
1/3"	PLAMP2406		Tamron	2.4~6.0	F1.2	Yes	No	Yes
1/3"	PLAMP2808		Fujinon	2.8~8.0	F1.2	Yes	No	Yes
1/3"	PLAMP2812		Fujinon	2.8~12.0	F1.4	Yes	No	Yes
1/2.7"	PLAMP0722		Ricon	7.0~22.0	F1.4	Yes	No	Yes
1/3"	PLAMP0550		Tamron	5.0~50.0	F1.4	Yes	No	Yes
1/3"	PLZ15/33		Fujinon	15.0~50.0	F1.5	Yes	No	Yes
1/2.7"	PLAMP0850A		Tamron	8.0-50.0	F1.6	Yes	Yes	Yes
1/2.7"	PLAMP2808A		Tamron	2.8-8.0	F1.2	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	
PLCD15V	Monitors	LCD Monitors		15" LCD monitor, 1024 x 768, 4:3 aspect ratio, two built-in speakers, 2x BNC input, S-Video in/output, RGB input	
PLCD19P	Monitors	LCD Monitors		19" LCD, 1280 x 1024, 5:4 aspect ratio, two built-in speakers, 2x BNC input, S-Video in/output, RGB input, DVI input, HDMI input	
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 :
	6 : PTZ(Dome)	6 : -	6 :	6 :	W: Wireless	A :
X:Hi-end	5 : PT	5 : Outdoor Vandal	5 :SMP	5 :	F : Optical I/F	
	4 : 360 deg.	4 : Outdoor normal	4 :	4 :	V : With lens	
S:Standard	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

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

Panasonic

Your Full-service Partner in Surveillance

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.

Panasonic Security Services

Design and Build

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

Installation Support with Trusted Partners

- On-site / remote technical support

System Implementation with SI Partners

Post-implementation Support

- Extended warranties are available