



Full HD / 1,920 x1,080 H.264 Weather Proof Camera featuring Optical 30x zoom and Super Dynamic

Key Features

- 1080p Full HD images up to 30 fps
- Super high resolution at Full HD / 1,920 x 1,080 created by 2.4 Megapixel high sensitivity MOS image sensor
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by new "UniPhier", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,920 x 1080 image size
- **30x optical zoom**
- 90x extra optical zoom at 640x360 resolution with 12x digital zoom enabling 1080x zoom.
- **Super Dynamic** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared to conventional cameras.
- **Face Super Dynamic** technology ensures clear face image.
- High sensitivity with Day/Night (ICR*) function:
0.5 lx (Color), 0.06 lx (B/W) at F1.6
* ICR: IR Cut filter Removal
- **VIQS** (Variable Image Quality on Specified area) technology allows the designated **2 areas** to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate. VIQS can be set on preset position (1 to 8) and except preset.
- Digital Noise Reduction: 3D-DNR ensures noise reduction in various conditions.
- Progressive scan ensures clear images with less motion blur and no tearing even when the subject is moving.
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes:
Outdoor scene / Indoor scene (50 Hz) / Indoor scene (60 Hz) / Fix shutter
Indoor scene (50 Hz / 60 Hz): Flicker caused by fluorescent lightning will be automatically compensated.
- **360 degrees endless Panning**
- Advanced auto tracking: The camera automatically pans and tilts to follow a moving subject and keep it in the center of the image.
- PTZ control can be taken very smoothly on the user friendly GUI with 16 speeds pan/tilt and new "Drag and Zoom" operation enabling finer control. 256 speeds available for system with WV-CU950 system controller.
- Up to 256 preset positions
- 360 map shot: 8 thumbnail images at 45 deg. intervals make it simple to direct the camera easily by clicking on a thumbnail.
- Industrial grade Pan / Tilt / Zoom mechanism for high reliability
- VMD (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 32 private areas, such as house windows and entrances/exits.
- Camera title display: Up to 20 alphanumeric characters on the browser

- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SDXC/SDHC/SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic alarm protocol output.
- Full duplex bi-directional audio allows interactive communication between camera site and monitoring site.
- JPEG Image compression ratio can be changed by alarm so that higher quality image can be provided.
- Prioritized stream control: One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- SDXC/SDHC/SD Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- H.264 max. bit rate / client and Total bit rate control allows flexible network traffic management. Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.
- Internet mode: H.264 images can be transmitted over HTTP protocol.
- Multi-language: English / Italian / French / German / Spanish / Russian / Chinese / Japanese
- IPv4/IPv6 protocol supported
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- Onvif compliant model
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4x(UL50), NEMA 4x compliant.
- Dehumidification device for use in various weather conditions
- Rain wash coat dome cover
- Ambient Operating Temperature : -50 °C to +55 °C (-58 °F to 131 °F)
- Fog and Sandstorm compensation
- AEM (Auto Eyelid Mechanism) offers images that are more natural and easy to watch reducing doubled images when direction of the lens moved above the horizontal.

Standard Accessories

• CD-ROM*1	1 pc.	• Front/Rear Sun Shield	1 set
• Installation Guide.....	1 pc.	• Front/Rear Sun Shield Fixing Screws	2 pcs. (incl. 1 spare)
The followings are for installation.		• Code Label*2	1 pc.
• Protection Cover	1 pc.	*1 The CD-ROM contains the operating instructions (PDFs) and different kinds of tool software programs.	
• RJ45 connector	1 pc.	*2 This label may be required for network management. The network administrator shall retain the code label.	
• 8P Alarm Cable.....	1 pc.		
• Connector Kit for 24 V AC	1 pc.		

Optional Accessories

Wall Mount Bracket
WV-Q122A

Ceiling Mount Bracket
WV-Q121B

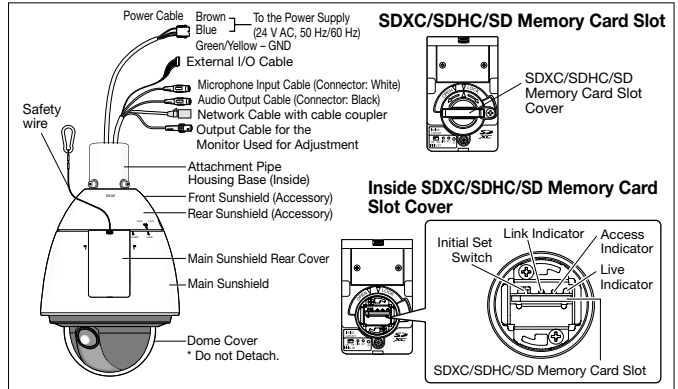
Specifications

Camera	Image Sensor	Approx. 1/3 type MOS image sensor	
	Effective Pixels	Approx. 2.4 mega pixels	
	Scanning Mode	Progressive scan	
	Scanning Area	5.38 mm (H) x 3.02 mm (V) [7/32 inches(H) x 1/8 inches(V)]	
	Minimum Illumination	Color: 0.5 lx, BW: 0.06 lx (F1.6, Auto slow shutter: Off (1/30s), Gain: On(High)) Color: 0.03 lx, BW: 0.004 lx (F1.6, Auto slow shutter: Max. 16/30s, Gain: On(High)) ¹	
	White Balance	AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K)	
	Light Control Mode	Outdoor scene: Automatic integration of ALC and ELC Indoor scene [50 Hz]: Automatic integration of ALC and ELC (up to 1/100 s) Indoor scene [60 Hz]: Automatic integration of ALC and ELC (up to 1/120 s) Fix shutter	
	Shutter Speed	Fix shutter: 1/30, 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 (only at Super Dynamic Off)	
	Super Dynamic	On / Off	
	Face Super Dynamic	On / Off (Only when Super Dynamic : On)	
	Dynamic Range	105 dB typical (Super Dynamic: On, Light Control mode: Indoor)	
	Adaptive Black Stretch	On / Off (Only when Super Dynamic : Off)	
	Fog compensation	On / Off	
	AGC	On (Low, Mid, High) / Off	
	Electronic Sensitivity UP	Off / AUTO (Max. 2x (2/30 s), 4x (4/30 s), 6x (6/30 s), 10x (10/30 s), 16x (16/30 s))	
	Day/Night (ICR)	Mode : AUTO1 / AUTO2 / AUTO3 / On / Off, Level: High / Low, with external control	
	Digital Noise Reduction	High / Low	
	Video Motion Detection	4 areas, Sensitivity: 15 steps, Detection size: 10 steps	
	Privacy Zone	Up to 8 zones / Up to 32 zones, Gray / Mosaic	
	Image Stabilizer	On / Off	
VIQS	Up to 2 zones at preset position 1-8 and except preset		
Double Image Reduction	On / Off		
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks)		
Focus distance	Limited / Unlimited		
Lens	Focal Length	4.3 mm - 129.0 mm, 30x	
	Zoom Ratio	30x / 90x with extra optical zoom (at 640 x 360)	
	Digital (Electrical) Zoom	12x (Max. 1080x combined with extra optical zoom at 640 x 360)	
	Angular Field of View	H: 2.6° (TELE) - 64.6° (WIDE), V: 1.6° (TELE) - 38.2° (WIDE)	
	Maximum Aperture Ratio	1 : 1.6 (WIDE) - 4.7 (TELE)	
	Focusing Range	2.0 m - ∞	
	Aperture Range	F1.6 - Close	
	Panning Range	360° endless	
	Panning Speed	Manual: approx. 0.065°/s - 120°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 300°/s	
	Tilting Range	-15° to 195° (upward-level-downward) Auto Eyelid Mechanism (Double image reduction) Selectable tilting angle: 0° / -5° / -10° / -15°	
Tilting Speed	Manual: approx. 0.065°/s to 120°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 300°/s		
Proportional Pan/Tilt Control	Yes		
Number of Preset Positions	256		
Auto Mode	preset sequence / auto pan / auto track / patrol		
Image Hold	On / Off		
PTZ Position Display	On / Off		
Self Return	10 s / 20 s / 30 s / 1 min / 2 min / 3 min / 5 min / 10 min / 20 min / 30 min / 60 min		
Map Shot	360° map shot / preset map shot		
Browser GUI	Camera Control	Pan/Tilt (256 steps), Zoom, Focus, Click centering, Drag zoom, Iris, Preset position call and program, Auto mode	
	Display Mode	Spot, Quad: Image from 16 cameras can be displayed in 4 different Quad screens or 16 split screen (JPEG only), 20 characters camera title available. Up to 20 alphanumeric characters	
	Camera Title	Up to 20 alphanumeric characters	
	Clock Display	Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)	
	Alarm Control	Reset	
	One Shot Capture	A still picture will be displayed on a newly opened window.	
	Audio	Mic (Line) Input: On / Off Volume adjustment: Low / Middle / High Audio Output : On / Off Volume adjustment: Low / Middle / High	
	SD Memory Data Download (GUI)/Setup Menu Language	Still or motion images recorded in the SDXC/SDHC/SD memory card can be downloaded. English / Italian / French / German / Spanish / Russian / Chinese / Japanese	
	System Log	Up to 100 (Internal)	
	Supported OS ^{2,3}	Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3	
Supported Browser	Windows® Internet Explorer® 11 (32 bit), Windows® Internet Explorer® 10 (32 bit), Windows® Internet Explorer® 9 (32 bit), Windows® Internet Explorer® 8 (32 bit), Windows® Internet Explorer® 7 (32 bit)		
Network	Network IF	10Base-T / 100Base-TX, RJ45 connector	
	Image Resolution	Image Capture Mode: H.264	: 1,920 x 1,080 / 640 x 360 / 320 x 180, up to 30 fps
		Image Capture Mode: 2 mega pixel [16:9]	JPEG (MJPEG): 1,920 x 1,080 / 640 x 360 / 320 x 180, up to 30 fps
		Image Capture Mode: 1.3 mega pixel [16:9]	JPEG (MJPEG): 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps
	H.264 ⁴	Image Capture Mode: H.264	: 1,280 x 960 / VGA(640 x 480) / QVGA(320 x 240), up to 30 fps
		Image Capture Mode: 1.3 mega pixel [4:3]	JPEG (MJPEG): 1,280 x 960 / VGA(640 x 480) / QVGA(320 x 240), up to 30 fps
		Transmission Mode	Constant bitrate / Frame rate priority / Best effort / Advanced VBR
	Frame Rate	1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps	
	Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 6,144 / 8,192 / 10,240 / 12,288 / 14,336 kbps	
	Image Quality	Low / Normal / Fine	
	Refresh Interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5 s	
	Transmission Type	Unicast / Multicast	
	JPEG	Image Quality	10 steps
		Refresh Interval	0.1 fps - 30 fps
	Transmission Type	Pull / Push	
Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps for transmitting, AAC for audio recording and sound detection		
Audio Mode	Off / Mic (Line) Input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)		
Authentication for Audio	Level 1 only / Level 2 higher / All users		
Total Bit Rate	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited		
Supported Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTSP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP		
FTP Client	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDXC/SDHC/SD memory card is available.)		
No. of Simultaneous Users	Up to 14 users (Depends on network conditions)		

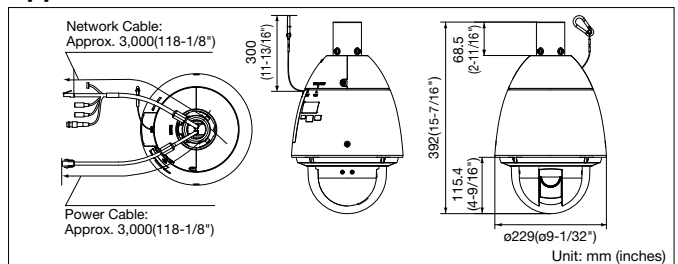
Network	SDXC/SDHC/SD Memory Card (Option)	H.264 recording (Audio recording is enable): Manual REC / Alarm REC (Pre/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Pre/Post) / Backup upon network failure Compatible SD (SDHC/SDXC) card: Panasonic 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64GB** model *SDHC card, ** SDXC card (except miniSD card and microSD card)
	Cellular Phone Compatibility	JPEG image
Alarm	Mobile Terminal Compatibility	iPad, iPhone, iPod touch (iOS 4.2.1 or later) Android™ mobile terminals
	Alarm Source	3 terminals input, VMD, Command alarm, Sound detection
Input/Output	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output
	Alarm Log	With SDXC / SDHC / SD memory card: 5,000 logs, without SDXC / SDHC / SD memory card: 1,000 logs
General	Schedule	Alarm / VMD / Access permission / H.264 recording / Sound detection
	Monitor Output (for adjustment)	VBS : 1.0V(p-p) / 75Ω, NTSC / PAL composite, BNC Jack
General	Microphone/Line Input	MIC IN and Line IN are selectable. ø3.5 mm stereo mini jack (monaural input) (Applicable microphone: Plug-in power type) Supply voltage: 2.5 V ±0.5 V Input impedance: approx. 2 kΩ
	Audio Output	ø3.5 mm stereo mini jack (monaural output) Line level
General	External I/O Terminals	ALARM IN 1 (DAY/NIGHT IN), ALARM IN 2 (ALARM OUT), ALARM IN 3 (AUX OUT)
	Safety/EMC Standard	<Safety> UL (UL60950-1), C-UL (CAN/CSA C22.2 No.60950-1), CE, IEC60950-1 <EMC> FCC Part15 Class A, ICES-003 Class A, EN55022 Class B, EN55024
General	Power Source and Power Consumption	AC24 V : 3.5 A, 55 W PoE+ : 470 mA, 25 W (IEEE802.3at compliant) POE injector (60 W) : 1.0 A, 50 W
	Ambient Operating Temperature	AC24 V and Tested PoE Injector (60 W) : -50 °C to +55 °C (-58 °F to 131 °F) * with limitations POE+ : -30 °C to +55 °C (-22 °F to 131 °F)
General	Ambient Operating Humidity	Less than 90 % (no condensation)
	Impact Protection	IEC 62262 : 2002 IK10 (Impact energy 20J)
General	Water and Dust Resistance	IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4x(UL50), NEMA 4x compliant.
	Dimensions	ø229 mm x 392 mm(H) (ø9-1/32 inches x 15-7/16 inches(H)) diameter of the dome 160 mm(6-5/16 inches)
General	Mass (approx.)	Approx. 5.0 kg (11.04 lbs)
	Finish	Main body : Aluminum die cast, Natural silver Sunshields : ASA resin coating, Natural silver Dome section : Clear polycarbonate resin

¹ Converted value
² Refer to "Notes on Windows Vista® / Windows® 7 / Windows® 8 / Windows® 8.1" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 8.1 or Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.
³ When using IPv6 for communication, use Microsoft® Windows® 8.1 or Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.
⁴ Transmission for 2 streams can be individually set in the same compression method.

Part Names and Functions



Appearance



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Important

- Safety Precaution: Carefully read the operating instructions and installation manual before using this product.
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the product.
- Masses and dimensions are approximate. • Specifications are subject to change without notice.
- All product pictures are NTSC models.

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