Panasonic **BUSINESS**

Super Dynamic Full HD Weatherproof Network Camera

WV-SPW531AL



*i-VMD Type2 : Intruder Detection / Loitering Detection / Direction Detection / Scene Change Detection / Object Detection / Cross Line Detection

Full HD / 1,920 x 1,080 60 fps H.264 Weatherproof Network Camera featuring Super Dynamic

Key Features

- 1080p Full HD images up to 60 fps*1
- Approximate 1/3 inches, high sensitivity MOS image sensor
- Super high resolution at Full HD / 1,920 x 1,080 created by high sensitivity MOS image Sensor.
- Multiple H.264 (High profile) streams (max. 4 streams) and JPEG streams ensure simultaneous real time monitoring and high resolution recording.
- Maximum Screen Size is 2,048 x 1,536* @30 fps, H.264 * Used by super resolution technology
- Enhanced Super Dynamic*1 and ABS (Adaptive Black Stretch) technologies deliver 133 dB wider dynamic range compared to conventional cameras.
- Smart coding Technology: Group of Pictures (GOP) control function removes unnecessary information from the frame for realizing efficient encoding. Auto VIQS (Variable Image Quality on Specified area) function recognizes the no movement area in a video automatically and lowering the resolution of it to reduce the data size. With the latest bit rate reducing technology, GOP control,

Auto VIQS, 3D-MNR (Multi process Noise Reduction) and FDF (Frequency Divided Filter), the network bandwidth and the disk space of recorder can be saved.

- High sensitivity with Day/Night (ICR*) function : 0.07 lx (Color), 0.01 lx (B/W) at F1.6 *ICR: IR Cut filter Removal
- IR LED equipped: The equipped infrared LED makes it possible to take pictures at zero lx.
- IR LED is controlled to match the environment, thereby the camera provides clear images of human faces without white blur.
- ABF (Auto Back Focus) ensures easy installation.
- Newly developed lens with aperture control function realizes the best focus in any environment.
- VIQS (Variable Image Quality on Specified area) technology allows the designated eight 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.
- Cropping function enables to provide whole image and the part image simultaneously. Up to 4 image capture areas can be specified, and it is also possible to control the sequence.
- Face Super Dynamic technology ensures clear face image.
- Lens distortion compensation for the distorted images can be adjusted 256 steps.
- Electronic sensitivity enhancement : Auto (Up to 16/30s) / 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.
- 3x extra optical zoom at 640 x 360 resolution

- · 2x, 4x digital zoom controlled by browser
- VMD (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 8 private areas, such as house windows and entrances/exits.
- 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.
- 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 (H.264 / JPEG). Realize long-term recording and auto backup function.
- Can be added new intelligent extension software in addition to built-in VMD (Video Motion Detection), alarm function.
- Fog compensation function equipped as standard.
- HLC (High Light Compensation) technology reduces strong light sources such as vehicle headlights to prevent camera being blinded.
- SCC (Super Chroma Compensation) function realizes a better color reproducibility even in low illumination.
- 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.
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X(UL50), NEMA 4X compliant.
- Dehumidification device for use with various weather conditions

Optional Accessory

Adaptor Box WV-Q120A



^{*1} Super Dynamic function is automatically set off on 60 fps mode.

Specifications

Camera	_		Approx. 1/3 type MOS image sensor
		ng Mode	Progressive scan
	Scanning Area		5.35 mm (H) x 3.34 mm(V) {7/32 inches (H) x 1/8 inches (V)}
	Minimum Illumination		Color: 0.07 lx, BW: 0.01 lx (F1.6, Maximum shutter: Max. 1/30s, Gain: On(High))
			BW: 0 lx (F1.6, Maximum shutter: Off(1/30 s), Gain: High, when the IR LED is lit)
	IR LED	Light	Color: 0.005 lx, BW: 0.0007 lx (F1.6, Maximum shutter: Max. 16/30s, Gain: On(High))
		irradiation distance	Off / Auto(High / Mid / Low) Approx. 30 m {98.43 feet}
	White E		AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K
		ontrol Mode	Outdoor scene / Indoor scene (50 Hz) / Indoor scene (60 Hz) / Fix shutter
	Shutter		[2 mega pixel [16 : 9] (60 fps mode)]
	Criation	Оросс	OFF(1/60), 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000,1/10000 Other than [2 mega pixel [16 : 9](60 fps mode)]
			OFF(1/30), 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250,1/500, 1/1000, 1/2000, 1/4000, 1/10000
		Dynamic *2	On(High) / On(Normal) / Off
		uper Dynamic	On / Off (only when Super Dynamic : On)
		e Black Stretch	On / Off (only when Super Dynamic : Off)
		mpensation	On / Off (only when Super Dynamic / Adaptive black stretch : Off)
	AGC	nt compensation(HLC)	On / Off (only when Super Dynamic / Adaptive black stretch : Off)
	Maximum shutter		On (Low) / On(Mid), On(High) / Off max. 1/1000 s, max. 1/500 s, max. 1/250 s, max. 1/100 s, max. 1/60 s, max. 1/120 s, max. 2/120 s , max. 2/100 s, max. 1/30 s, max. 2/30 s,
			max. 4/30 s, max. 6/30 s, max. 10/30 s, max. 16/30 s
	Day/Night (ICR)		Off / On / Auto1 (Normal) / Auto2 (IR Light) / Auto3 (SCC)
	Dynamic Range		133 dB typ. (Super Dynamic : On)
	Digital Noise Reduction		High / Low
	Video Motion Detection		4 areas, Sensitivity : 15 steps, Detection size : 10 steps
	Privacy Zone VIQS		Up to 8 zones
	VIQS Camera Title (OSD)		Up to 8 zones Up to 20 characters (alphanumeric characters, marks)
	Focus Adjustment		ABF / MANUAL (Html only)
	Lens Distortion Compensation		256 steps
Lens		cal Length	2.8 mm – 10 mm {1/8 inches – 13/32 inches}
_00	Angular Field of View		[16:9 mode] Horizontal: 31 ° (TELE) - 112 °(WIDE)
			Vertical : 17 ° (TELE) - 60 ° (WIDE)
			[4:3 mode] Horizontal: 26 ° (TELE) - 91 ° (WIDE)
			Vertical : 19 ° (TELE) - 67 ° (WIDE)
	Maximum Aperture Ratio		1:1.6 (WIDE) - 1:3.4 (TELE)
		ng Range	0.3 m - ∞
		Ceiling mounting	Horizontal: ±180° (PAN rotation part)
(Camera moi	unt bracket)		Vertical : 0° to 90° (TILT rotation part)
		\A/=!!	Yaw : -190° to +100° (YAW rotation part)
		Wall mounting	Horizontal: ±90° (TILT rotation part)*
			Vertical : ±90° (TILT rotation part)* Yaw :-190° to +100° (YAW rotation part)
Browser	Croppii	l	Off / JPEG(1) / JPEG(2) / JPEG(3) / H.264(1) / H.264(2) / H.264(3) / H.264(4) / H.264(all)
GUI	Огорра	19	Alarm action On / Off
	Camera	Control	Brightness, AUX On/Off
	Display Mode		Spot, Quad : Image from 16 cameras can be displayed in 4 different Quad
	Display Wode		screens or 16 split screen (JPEG only). 20 characters camera title available
	Digital Zoom		1x, 2x, 4x controlled by browser GUI
	Camera Title		Up to 20 alphanumeric characters
	Clock [Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)
	Alarm (Reset
		ot Capture	A still picture will be displayed on a newly opened window.
	Audio		Mic (Line) Input: On / Off Volume adjustment: Low / Middle / High
	CD Mar	Data Danieland	Audio Output : On / Off Volume adjustment : Low / Middle / High
	SD Memory Data Download		Still or motion Images recorded in the SDXC/SDHC/SD memory card
	CIII / Catura Marrial annius		can be downloaded.
	GUI / Setup Menu Language System Log		English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese Up to 100 (Internal)
	System Log		Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error log
	Supported OS *3		Microsoft® Windows® 8.1, Microsoft® Windows® 8,
	Supported Browser		Microsoft® Windows® 7, Microsoft® Windows Vista®
			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), Safari, Google Chrome, Mozilla Firefox
Network			10Base-T / 100Base-TX, RJ45 connector
	Image Resolution		•2 mega pixel [16:9] (30/60 fps)
			1,920 x 1,080 / 1,280 x 720 / 640 x 360 / 320 x 180 / 160 x 90
			•2 mega pixel [4:3] (30 fps)
			1,600 x 1,200 / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120
			•3 mega pixel [4:3] (30 fps) * Used by super resolution technology
		Transmission Made	2,048 x 1,536* / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 / 160 x 120
		Transmission Mode Frame Rate	
		Bit Rate/Client	1/3/5/7.5/10/12/15/20/30/60 fps 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 / 16,384 / 20,480 / 24,576 / 30,720*/ 40,960* kbps
	H.264	Image Quality	Image quality (Constant bit rate / Best effort):
	*4	(Constant bit rate/Best effort)	Low(Motion priority) / Normal/ Fine (Image quality priority)
		Smart Coding mode	On (Low / Mid / High) / Off (Only when "Variable bit rate" is selected)
		Refresh interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5s
		Transmission Type	Unicast / Multicast
		Image Quality	10 steps
	JPEG	Refresh interval	0.1 fps - 30 fps (JPEG frame rate will be restricted when displaying both JPEG and H.264 images
	A	Transmission Type	Pull / Push
	Audio Compression		G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps / AAC-LC
	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
	Authen		64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimiter
	Authen Total B		
	Authen Total B	ted Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP,
	Authen Total B		IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, DiffServ
	Authen Total B		IPv6:TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, DiffServ IPv4:TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP,FTP, SMTP,
	Authen Total B	ted Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SMMP, DHCPv6, MLD, ICMP, ARP, DiffServ IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, DiffSe
	Authen Total B Suppor	ted Protocol	IPv6:TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, DiffServ IPv4:TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP,FTP, SMTP,

	H.264 recording:
Memory Card (Option)	Manual REC / Alarm REC (Pre/Post) / Schedule REC / Backup upon network failure Compatible(JPEG only) JPEG recording: Manual REC / Alarm REC (Pre/Post) / Backup upon network failure
* Manufactured by Panasonic	
(SD speed class 4 or higher)	
	Compatible SD (SDHC/SDXC) card :
SD Speed Class 10.	Panasonic 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64 GB** 128 GB**model
	*SDHC card, ** SDXC card (except miniSD card and microSD card)
Cellular Phone Compatibility	JPEG image, AUX control (by access level)
	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ mobile terminal
	3 terminals input, VMD, Command alarm, Audio detection alarm
	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification
Alam Actions	Indication on browser, FTP image transfer, Panasonic protocol output
Alarm Log	With SDXC/SDHC/SD memory card : Up to 50,000 logs for each SD memory card
	Alarm / VMD / Access permission / H.264 recording / Scene file
	VBS : 1.0 V [p-p] / 75 Ω, composite, RCA jack
(for adjustment)	An NTSC or PAL signal can be outputted from camera
	(either press the INITIAL SET switch quickly (within 1 second) or
	use software to select either NTSC or PAL signal).
Microphone/Line Input	ø3.5 mm monaural mini jack
	(monaural input) (Applicable microphone: Plug-in power type)
	Supply voltage : 2.5 V ± 0.5 V Input impedance : Approx. 2 k Ω (unbalanced
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), ALARM IN 2 (ALARM OUT), ALARM IN 3 (AUX OUT
Safety	UL (UL60950-1), C-UL (CAN/CSA C22.2 No.60950-1), CE, IEC60950-
EMS	FCC (Part15 ClassA), ICES003 ClassA, EN55022 ClassB, EN55024
Power Source and	When IR LED is On
Power Consumption	DC power supply: DC 12 V / 770 mA / Approx. 9.24 W
·	PoE (IEEE802.3af compliant): DC 48 V / 200 mA / Approx. 9.6 W* (Class 0 device
	* Maximum power consumption on the camera power input side.
	** ONLY CONNECT DC 12 V CLASS 2 POWER SUPPLY.
Ambient Operating Temperature	-40 °C to +50 °C (-40 °F to 122 °F)
	10 to 90 % (no condensation)
Water and Dust Resistance	
Dimensions	95 mm (W) x 99 mm (H) x 334.5 mm (L)
* Installing using the base bracket	{3-3/4 inches (W) x 3-57/64 inches (H) x 1ft 1-11/64 inches (L)}
	'Use the SD memory card that' complies with UHS-1 (Ultra High Speed-1) in the case of SD Speed Class 10. Cellular Phone Compatibility Mobile Terminal Compatibility Alarm Source Alarm Actions Alarm Log Schedule Monitor Output (for adjustment) Microphone/Line Input Audio Output External I/O Terminals Safety EMS Power Source and Power Consumption

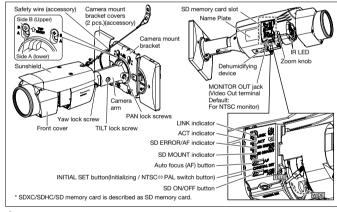
- *1 Converted value

 *2 Super Dynamic function is automatically set off on 60 fps mode.

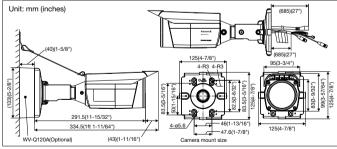
 *3 Refer to "Notes on Windows Vista® / Windows® 7 / Windows® 8.1" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 8.1 or Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.

 *4 Transmission for 4 streams can be individually set.

Part Names and Functions



Appearance



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