Panasonic
ideas for life

Super Dynamic HD Vandal Resistant Fixed Dome Network Camera
WV-NW502S

H264, True Day/Night Vandal Resistant HD Camera featuring *Super Dynamic*

Key Features

- 1,080p HD images up to 15 fps / 720p HD images up to 30 fps
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by "UniPhier®", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,280 x 960 image size (1.3 Megapixel mode)
- ***Super Dynamic*** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared with conventional cameras.
- ***Face Super Dynamic*** technology ensures clear face image.
- Up to 3 Megapixel (2,048 x 1,536) JPEG stream (3 Megapixel mode, JPEG only)
- H.264 and MPEG-4 are selectable for system migration.
- High sensitivity with Day/Night function: 1.0 lx (Color), 0.08 lx (B/W) at F1.2 (Wide,1.3 Megapixel mode)
- ABF (Auto Back Focus) ensures easy installation and stable focus in both color and B/W modes.
- Adaptive Digital Noise Reduction: Integration of 2D-DNR and 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.
- Superior color reproduction by primary (RGB) color filter
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Outdoor / Indoor / ELC / Fixed electronic shutter
  Outdoor / Indoor: Electronic shutter and ALC lens iris control are automatically controlled depending on the mode and luminance level.
  ELC: Up to 1/10,000 Electronic shutter is automatically applied for a fix iris lens.
  Fixed electronic shutter: Up to 1/10,000 fixed electronic shutter can be selectable.
- VMD (Video Motion Detector) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Face detection detect the position of human face, the information is sent by XML or video stream.
- Meta data for VMD is supplied to work with the WJ-ND400 playback VMD function.
- Privacy Zone can mask up to 8 private areas, such as house windows and entrances/exits.
- 2x, 4x digital zoom controlled by browser
- Camera title display: Up to 20 alphanumeric characters on the browser, Up to 16 alphanumeric characters with three selectable character sizes embedded in the image
- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SD/SDHC memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic 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.
- SD/SDHC Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- H.264/MPEG-4 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/MPEG-4 images can be transmitted over HTTP protocol.
- Multi-language GUI and setup menu: English, French, Italian, Spanish, German, Russian (PAL) / English, French (NTSC)
  * Installation required except for English
- IPv4/IPv6 protocol supported
- Analog Monitor output for easier installation
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Dehumidification device for use in various weather conditions
- Vandal resistant mechanism for high reliability
- 2.8 ~ 8.0 mm, 2.8x Varifocal Auto Iris lens
- ONVIF compliant model

Standard Accessories

- CD-ROM*1 ..... 1 pc.
- Installation Guide ..... 1 pc.
- Code Label*2 ..... 1 pc.

The followings are for installation.

- 2P Power Cable ..... 1 pc.
- 4P Alarm Cable ..... 1 pc.
- Camera Attachment ..... 1 pc.
- Mount Bracket ..... 1 pc.
- Base Cover ..... 1 pc.
- Fixing Screws (M4 x 8 mm) (1 piece of spare screw included) .... 5 pcs.
- Bit for tamperproof screw ..... 1 pc.
- Butyl tape ..... 1 pc.

*1 The CD-ROM contains Panasonic IP Setup Software, viewer software "Network Camera View 4", and Operation Instructions (PDF).
*2 This label may be required for network management. The network administrator shall retain the code label.

Optional Accessories

Embedded Ceiling Mount Bracket
WV-Q169

Smoke Dome Cover
WV-CW4S

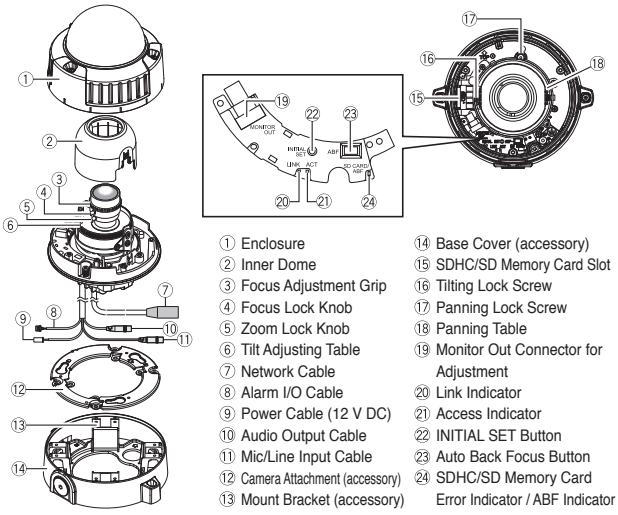
Specifications

TV System			NTSC	PAL
Camera	Image Sensor		1/3 type interline transfer CCD	
	Effective Pixels		1,296 (H) x 976 (V) x2	
	Scanning Mode		Progressive scan	
	Scanning Area		4.86 mm (H) x 3.65 mm (V)	
	Minimum Illumination *1	1.3 Megapixel mode	Color: 1.0 lx, B/W: 0.08 lx at F1.2 (Shutter: 1/30 s, AGC: High, SD: OFF), Color: 0.06 lx, B/W: 0.005 lx at F1.2 (Shutter: 16/30 s, AGC: High, SD: OFF)	
		3 Megapixel mode	Color: 2.0 lx, B/W: 0.16 lx at F1.2 (Shutter: 1/30 s, AGC: High), Color: 0.12 lx, B/W: 0.01 lx at F1.2 (Shutter: 16/30 s, AGC: High)	
	White Balance		AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)	
	Light Control Mode		Outdoor: Automatic integration of ALC and ELC Indoor: Automatic integration of ALC and ELC (up to 3/100 s) ELC: (up to 1/10,000 s) (ELC: only at Super Dynamic: OFF)	
	Shutter Speed		Fix shutter: 3/100, 2/100, 1/100, 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 (1.3 Megapixel mode only)	
	Face Super Dynamic		ON / OFF (Only at Super Dynamic: ON)	
	Dynamic Range		52 dB typical (Super Dynamic: ON, Light Control mode: Indoor)	
	Adaptive Black Stretch		ON / OFF (Only at Super Dynamic: 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))	
	Black and White Mode		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, Gray / Mosaic	
	Up Side Down		ON / OFF	
	Auto Image Stabilizer		ON / OFF	
	Camera Title (OSD)		Up to 16 alphanumeric characters (3 selectable character sizes)	
	Back Focus Adjustment		ABF / MANUAL, ABF mode upon CL/BW switching: AUTO / PRESET / FIX	
Lens	Vari Focal Length		2.8 mm ~ 8 mm, 2.8x varifocal	
	Angular Field of View		H: 35.0 (Tele) ~ 100 (Wide), V: 26.2 (Tele) ~ 73.4 (Wide)	
	Maximum Aperture Ratio		1 : 1.2 (Wide) ~ 1 : 1.8 (Tele)	
	Focusing Range		0.3 m ~	
Pan and Tilt			Panning Range: 170 Tilting Range: 75 Azimuth Range: 100	
Browser GUI	Camera Control		Brightness, AUX ON / OFF, Zoom (1x, 2x, 4x)	
	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.	
	Digital Zoom		1x, 2x, 4x controlled by browser GUI	
	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, Audio Output: ON / OFF	
	SD Memory Data Download		Still or Motion Images recorded in the SD/SDHC memory card can be downloaded.	
	GUI/Setup Menu Language		English, French (Installation required for French)	English, French, Italian, Spanish, German, Russian (Installation required except for English)
	System Log		Up to 100 (Internal), Up to 4,000 (SD/SDHC memory when the recording format is set to JPEG.) error logs	
	Supported OS		Microsoft® Windows® 7 Professional 64 bit/32 bit, Microsoft® Windows Vista® Business SP1 32 bit, Microsoft® Windows® XP Home Edition/ Professional SP3, The language of the OS must be same as selected GUI language.	
	Supported Browser		Windows® Internet Explorer® 8.0 32 bit (Microsoft® Windows® 7 64 bit/32 bit), Windows® Internet Explorer® 7.0 (Microsoft® Windows Vista® Business SP1 32 bit), Microsoft® Internet Explorer® 6.0 SP3 (Microsoft® Windows® XP Home Edition/Professional SP3)	
Network	Network IF		10Base-T / 100Base-TX, RJ-45 connector	
	Image Resolution *2		1.3 Megapixel mode (Aspect ratio [4:3]): H.264: 1,280 x 960 / SVGA (800 x 600) / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps MPEG-4: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: 1,280 x 960 / SVGA (800 x 600) / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps	
			1.3 Megapixel mode (Aspect ratio [16:9]): H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps	
			3 Megapixel mode (Aspect ratio [4:3]): H.264 :1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 15 fps MPEG-4: VGA (640 x 480) / QVGA (320 x 240), up to 15 fps JPEG: 2,048 x 1,536 / 1,280 x 960 / VGA (640 x 480), up to 15 fps	
			3 Megapixel mode (Aspect ratio [16:9]): H.264: 1,920 x 1,080 / 640 x 360 / 320 x 240, up to 15 fps JPEG: 1,920 x 1,080 / 640 x 360 / 320 x 240, up to 15 fps	
	H.264 / MPEG-4 *2	Transmission Priority	Constant bit rate / Frame rate	
		Frame Rate	1 / 3 / 5 / 7.5 /10 / 15 / 20* / 30* fps * 1.3 Megapixel mode only	1 / 3 / 5 / 7.5 / 10 / 12 (PAL model only) / 15 / 20* / 30* fps * 1.3 Megapixel mode only
		Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 8,192* kbps / Unlimited * H.264 mode only	
		Image Quality	LOW / NORMAL / FINE	
		Refresh Interval	0.2 s / 0.33 s / 0.5 s / 1 s / 2 s / 3 s / 4 s / 5 s	
		Transmission Type	UNICAST / MULTICAST	
	JPEG	Image Quality	10 steps	
		Transmission Type	PULL / PUSH	

TV System		NTSC	PAL
Network	Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps	
	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	IPv4: TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP IPv6: TCP/IP, UDP/IP, HTTP, RTP, FTP, SMTP, DNS, NTP, SNMP	
	FTP Client	Alarm image transfer, Periodic image transfer, Active/Passive selectable (When the FTP periodic transmission is failed, backup on an optional SDHC/SD memory card is available.)	
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)	
	SDHC/SD Memory Card (Option)	H.264 recording: Manual REC / Alarm REC (Pre/Post) JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC) card: Panasonic 256 MB, 512 MB, 1 GB, 2 GB, 4 GB*, 8 GB*, 16 GB* model * SDHC card	
Alarm	Alarm Source	3 terminal inputs, VMD, Command alarm	
	Alarm Log	With SDHC/SD memory card: 5,000 logs, Without SDHC/SD memory card: 1,000 logs	
	Alarm Actions	SDHC/SD memory recording, E-mail notification, Alarm terminal output, Indication on browser, FTP image transfer, Panasonic protocol output	
	Schedule	Alarm / VMD / Access permission	
Input / Output	Monitor Output (for adjustment)	1.0 V [P-P] / 75 , NTSC composite, RCA Jack	1.0 V [P-P] / 75 , PAL composite, RCA Jack
	Microphone/Line Input (Cable)	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 k	
	Audio Output (Cable)	ø3.5 mm stereo mini jack (monaural output) Line level	
	External I/O Terminals (Cable)	ALARM IN 1 / DAY/NIGHT IN, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT / EXPOSURE OUT	
General	Safety/EMC Standard	UL (UL60065), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	CE (EN55022 ClassB, EN55024)
	Power Source and Power Consumption	12 V DC: 630 mA, PoE (IEEE 802.3af): 7.6 W (Class 0 device)	
	Ambient Operating Temperature/Humidity	–30 C ~ +50 C (–22 F ~ 122 F) *3, 90 % or less (without condensation)	
	Water and Dust Resistance	IP66, IEC60529 measuring standard compatible	
	Impact Protection	IEC 60068-2-75 test Eh, 50J	
	Dimensions	ø164 mm x 146 mm (H), 191.5 mm (W) (Base Cover) (ø6-7/16" x 5-3/4" (H), 7-9/16" (W) (Base Cover))	
	Mass (approx.)	1.8 kg (4.0 lbs.) (with Mounting Bracket)	

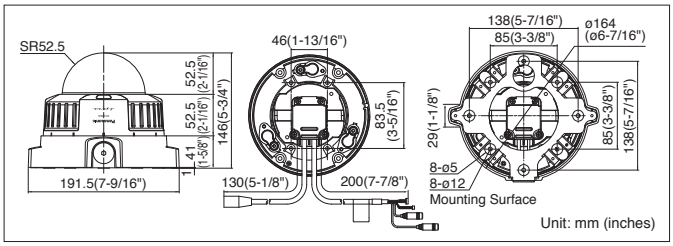
*1 With standard Clear Dome Cover *2 H.264 and MPEG-4 are alternative.
*3 When turning on the power at –10 C (14 F) or lower, warming up (at least 1 hour) is required before operation and setting.

Part Names and Functions



① Enclosure
② Inner Dome
③ Focus Adjustment Grip
④ Focus Lock Knob
⑤ Zoom Lock Knob
⑥ Tilt Adjusting Table
⑦ Network Cable
⑧ Alarm I/O Cable
⑨ Power Cable (12 V DC)
⑩ Audio Output Cable
⑪ Mic/Line Input Cable
⑫ Camera Attachment (accessory)
⑬ Mount Bracket (accessory)
⑭ Base Cover (accessory)
⑮ SDHC/SD Memory Card Slot
⑯ Tilting Lock Screw
⑰ Panning Lock Screw
⑱ Panning Table
⑲ Monitor Out Connector for Adjustment
⑳ Link Indicator
㉑ Access Indicator
㉒ INITIAL SET Button
㉓ Auto Back Focus Button
㉔ SDHC/SD Memory Card Error Indicator / ABF Indicator

Appearance



Unit: mm (inches)

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Important
– Safety Precaution: carefully read the operating instructions and installation manual before using this product.
– Panasonic can not be responsible for network performance and/or other manufacturer products that reside on the network.

• All TV pictures are simulated.
• Masses and dimensions are approximate.
• Specifications are subject to change without notice.
• These products may be subject to export control regulations.
• All product pictures are NTSC models.

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