



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
- 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.	• Base Cover	1 pc.
• Installation Guide	1 pc.	• Fixing Screws (M4 x 8 mm)	
• Code Label*2	1 pc.	(1 piece of spare screw included)	5 pcs.
		• Bit for tamperproof screw	1 pc.
		• Butyl tape	1 pc.
The followings are for installation.			
• 2P Power Cable	1 pc.	*1 The CD-ROM contains Panasonic IP Setup Software, viewer software "Network Camera View 4", and Operation Instructions (PDF).	
• 4P Alarm Cable	1 pc.	*2 This label may be required for network management. The network administrator shall retain the code label.	
• Camera Attachment	1 pc.		
• Mount Bracket	1 pc.		

Optional Accessories

Embedded Ceiling Mount Bracket
WV-Q169



Smoke Dome Cover
WV-CW4S



Specifications

TV System	NTSC	PAL
Camera	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	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)	
*1	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 Mount	CS-mount	
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 Tiltting Range: 75 Azimuth Range: 100	
Browser	Camera Control: Brightness, AUX ON / OFF, Zoom (1x, 2x, 4x)	
GUI	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 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® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3	
	Supported Browser: Windows® Internet Explorer® 10.0 (32 bit), Windows® Internet Explorer® 9.0 (32 bit), Windows® Internet Explorer® 8.0 (32 bit), Windows® Internet Explorer® 7.0 (32 bit), Microsoft® Internet Explorer® 6.0 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 bitrate / Frame rate priority / Best effort / Advanced VBR	
	Frame Rate: 1 / 3 / 5 / 7.5 / 10 / 15 / 20* / 30* fps 1 / 3 / 5 / 7.5 / 10 / 12 (PAL model only) / 15 * 1.3 Megapixel mode only / 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	

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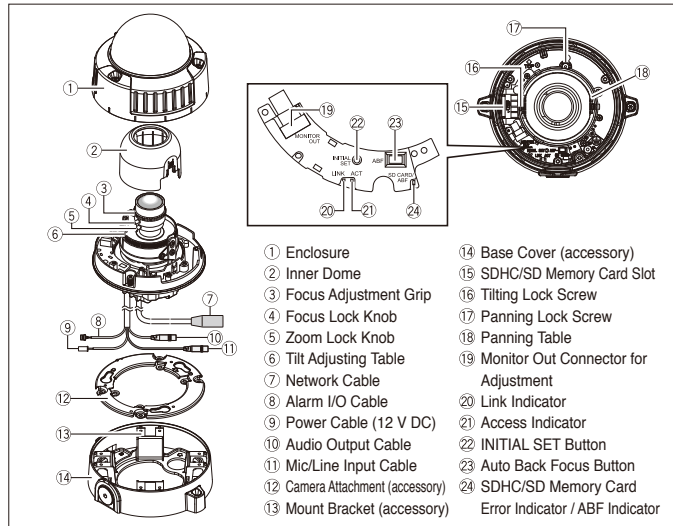
Important

- 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 network.

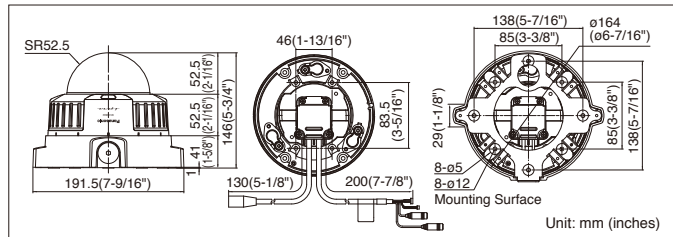
TV System	NTSC	PAL
Network	Audio Compression: G.726 (ADPCM) 32 kbps / 16 kbps	
	Audio Mode: OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
	Authentication for Audio: Level 1 only / Level 2 higher / All users	
	Total Bit Rate: 64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited	
	Supported Protocol: IPv4: TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTMP/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 Ω, NTSC composite, RCA Jack 1.0 V [P-P] / 75 Ω, PAL composite, RCA Jack	
	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 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), CE (EN55022 ClassB, EN55024) C-UL (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	
	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



Appearance



- 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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