



## 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 <b>WV-Q169</b> 	Smoke Dome Cover <b>WV-CW4S</b> 
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# Specifications

TV System	NTSC	PAL
<b>Camera</b>		
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 Mount	CS-mount	
<b>Lens</b>		
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 ~	
<b>Pan and Tilt</b>	Panning Range: 170 Tilting Range: 75 Azimuth Range: 100	
<b>Browser GUI</b>		
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 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	
<b>Network</b>		
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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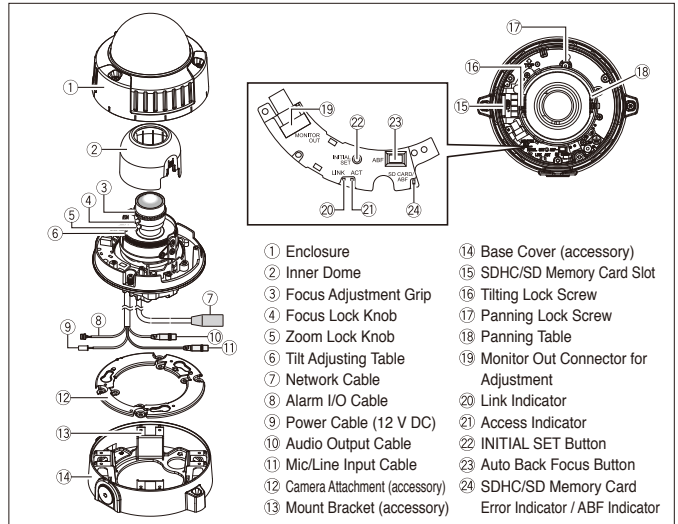
### Important

- 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.

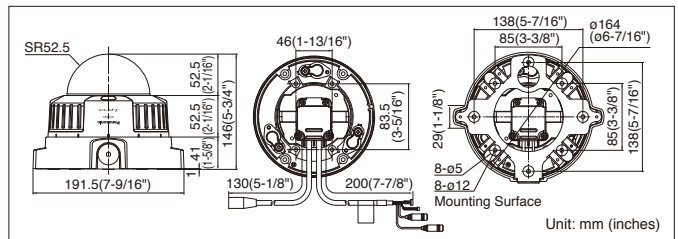
TV System	NTSC	PAL
<b>Network</b>		
Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps	
Audio Mode	OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
Authentication for Audio	Level 1 only / Level 2 higher / All users	
Total Bit Rate	64 / 128 / 256 / 384 / 512 / 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	
<b>Alarm</b>		
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	
<b>Input / Output</b>		
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 (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	
<b>General</b>		
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



## 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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