



HD/1,280 x 960 H.264 PTZ Dome Network Camera.

Key Features

- 720p HD images up to 30 fps
- Newly developed 1.3 Megapixel MOS Sensor
- 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
- 18x optical zoom. 36x extra optical zoom at VGA resolution with 8x digital zoom enabling 288x zoom.
- Wide Dynamic Range and ABS (Adaptive Black Stretch) technologies deliver wider dynamic range compared with conventional cameras.
- Face Wide Dynamic Range technology ensures clear face image.
- H.264 and MPEG-4 are selectable for system migration.
- High sensitivity with Day/Night function : 0.6 lx (Color), 0.5 lx (B/W) at F1.6 (Wide)
- Adaptive Digital Noise Reduction: 2D-DNR and 3D-DNR integration ensures reduced noise and motion blur in various conditions.
- Superior color reproduction by primary (RGB) color filter
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Outdoor / Indoor / Fixed electronic shutter
Outdoor / Indoor: Electronic shutter and ALC lens iris control are automatically controlled depending on the mode and luminance level.
Fixed electronic shutter: Up to 1/10,000 fixed electronic shutter can be selectable.
- Panning with auto flip function can be performed 0 to 360 degrees.
- PTZ control can be taken 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 64 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 Detector) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 2 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 SDHC/SD 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.
- 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.
- SDHC/SD 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.
- 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
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- ONVIF compliant model

Standard Accessories

- CD-ROM*11 pc.
- Installation Guide.....1 pc.
- Decorative Cover.....1 pc.
- Power Cable Plug.....1 pc.
- Code Label*21 pc.

The followings are for installation.

- Camera Mount Bracket (w/safety wire)1 pc.
- Camera Fixing Screw2 pcs. (incl. 1 spare)

*1 The CD-ROM contains the operating instructions (PDFs) and different kinds of tool software programs.
*2 This label may be required for network management. The network administrator shall retain the code label.

Optional Accessories

Inner Dome Cover WV-Q157 	Surface Ceiling Mount Brackets WV-Q156C (Clear) WV-Q156S (Smoke) (Smoke Type) 	Embedded Ceiling Mount Brackets WV-Q155C (Clear) WV-Q155S (Smoke) (Smoke Type) 
Wall Mount Brackets WV-Q154C (Clear) WV-Q154S (Smoke) (Smoke Type) 	Ceiling Mount Bracket WV-Q105 	

* Not compatible with optional accessories of conventional cameras

Specifications

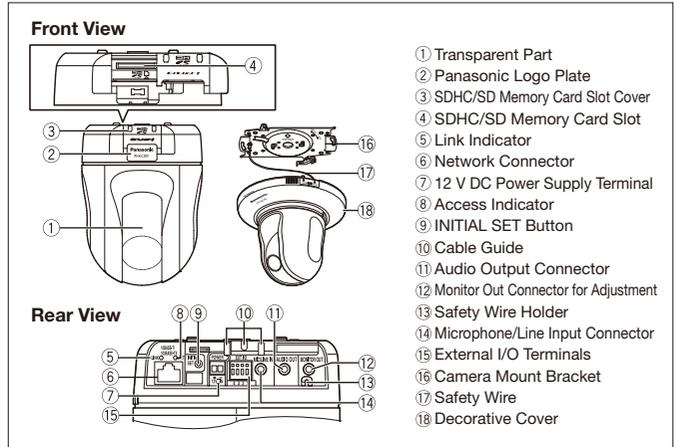
TV System	NTSC	PAL
Camera	Image Sensor	
	1/3 type MOS Sensor	
	Effective Pixels	
	Approx. 1.3 megapixel	
	Scanning Mode	
	Progressive scan	
	Scanning Area	
	4.8 mm (H) x 3.6 mm (V) (3/16" (H) x 5/32" (V))	
	Minimum Illumination	
	Color: 0.6 lx (F1.6, Auto slow shutter: Off (1/30 s), AGC: High, WDR Off) 0.038 lx (F1.6, Auto slow shutter: max. 16/30 s, AGC: High, WDR Off) BW: 0.5 lx (F1.6, Auto slow shutter: Off (1/30 s), AGC: High) 0.031 lx (F1.6, Auto slow shutter: max. 16/30 s, AGC: High)	
	White Balance	
	ATW1 / ATW2 / AWC	
	Light Control Mode	
	Indoor scene (50 Hz / 60 Hz) / Outdoor scene / Fix shutter	
	Shutter Speed	
	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	
	Wide Dynamic Range	
	ON / OFF	
	Face Wide Dynamic Range	
	ON / OFF	
Adaptive Black Stretch		
ON / OFF		
AGC		
ON (LOW, MID, HIGH) / OFF		
Auto Slow Shutter		
OFF (1/30 s), max. 2/30 s, max. 4/30 s, max. 6/30 s, max. 10/30 s, max. 16/30 s		
Simple Black and White Mode		
OFF / AUTO		
Digital Noise Reduction		
High / Low		
Video Motion Detection		
ON / OFF, 4 areas available		
Privacy Zone		
ON / OFF (up to 2 zones available)		
Up Side Down		
Ceiling mount only		
Image Stabilizer		
ON / OFF		
Camera Title (OSD)		
ON / OFF		
Lens	Focal Length	
	4.7 mm - 84.6 mm	
	Zoom Ratio	
	18x / 36x with extra optical zoom (at VGA resolution)	
	Digital (Electronic) Zoom	
	8x (Max. 288x combined with extra optical zoom under VGA)	
	Angular Field of View	
	H: 3.2° (Tele) - 55.2° (Wide), V: 2.4° (Tele) - 42.1° (Wide)	
	Maximum Aperture Ratio	
	1 : 1.6 (Wide) - 2.8 (Tele)	
	Focus Range	
	1.5 m - ∞	
	Aperture Range	
	F1.6 - 22, Close	
	Pan and Tilt	Panning Range
0° - 350°		
Panning Speed		
Manual: approx. 0.5°/s - 100°/s, Preset: up to approx. 300°/s		
Tilting Range		
-30° - 90° (upward-level-downward)		
Tilting angle limit: 10° / 5° / 3° / 0° / -3° / -5° / -10° / -15° / -20° / -25° / -30°		
Tilting Speed		
Manual: approx. 0.5°/s - 100°/s, Preset: up to approx. 100°/s		
Proportional Pan/Tilt Control		
Yes		
Number of Preset Positions		
64		
Auto Mode		
Auto pan / Preset sequence / 360 map-shot / Preset map-shot		
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		
Pan/tilt flip *1		
ON / OFF		
Map Shot		
360 map shot / preset map shot		
Browser GUI	Camera Control	
	Pan/Tilt (16 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.	
	Camera Title	
	Up to 20 characters (alphanumeric characters, marks), Character size: Small	
	Clock Display	
	Time: 12H / 24H, Date: 5 formats on the browser, Summer time (Manual/AUTO)	
	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	
Still or motion images recorded in the SDHC/SD 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 (SDHC/SD 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 *3	
	Aspect ratio: [4 : 3]	
	H.264: 1,280 x 960 / 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 (MJPEG): 1,280 x 960 / 640 x 480 / 320 x 240, up to 30 fps	
	Aspect ratio: [16 : 9]	
	H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG (MJPEG): 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps	
	Transmission Mode	
	Constant bitrate / Framerate priority / Best effort / Advanced VBR	
	MPEG-4 *2	
	Frame Rate	
	1 / 3 / 5 / 7.5 / 10 / 15 / 20 / 30 fps 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 / 8,192 kbps / Unlimited * H.264 mode Only	
	Image Quality	
LOW / NORMAL / FINE		
Refresh Interval		
0.2 s / 0.25 s / 0.33 s / 0.5 s / 1 s / 2 s / 3 s / 4 s / 5 s		
Transmission Type		
UNICAST / MULTICAST		
JPEG (MJPEG)		
Image Quality		
0 SUPER FINE / 1 FINE / 2 / 3 / 4 / 5 NORMAL / 6 / 7 / 8 / 9 LOW (10 steps: 0-9)		
Transmission Interval		
0.1 fps - 30 fps (JPEG frame rate will be restricted when displaying both JPEG and H.264/MPEG-4 images.)		
Audio Compression		
G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 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		
IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6 IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP		
FTP Client		
Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDHC/SD memory card is available.)		
Multi-Screen		
Up to 16 camera images can be displayed simultaneously on a multi-screen. (Including the camera itself)		

- 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.

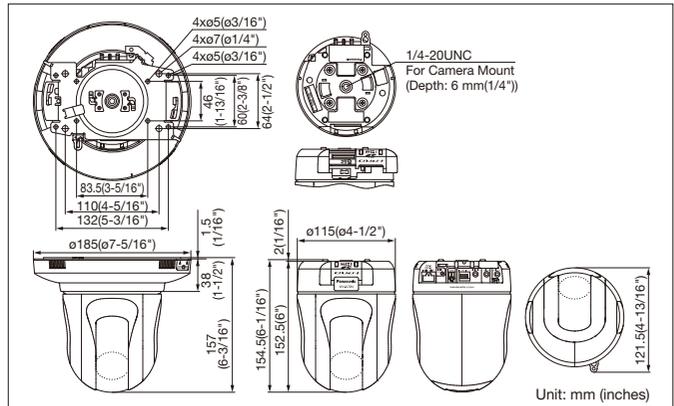
TV System	NTSC	PAL
Network	Maximum Concurrent Access Number	
	Up to 14 (Depends on network conditions)	
Alarm	SDHC/SD Memory Card (Option)	
	H.264 recording: Manual REC / Alarm REC (PRE/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC) card: Panasonic 256 MB, 512MB, 1GB, 2 GB, 4 GB*, 8 GB*, 16GB*, 32GB* model *SDHC card	
Input / Output	Cellular Phone Compatibility	
	JPEG image, panning / tilting / zoom control, AUX control (by access level)	
General	Alarm Source	
	3x Terminal inputs, VMD, Command alarm	
General	Alarm Actions	
	SD memory recording, E-mail notification, Indication on browser, Camera positioning, Preset position 1 - 64, FTP image transfer, Terminal output, Panasonic protocol output	
General	Alarm Log	
	With SD memory card: 5,000 logs, Without SD memory card: 1,000 logs	
General	Schedule	
	Alarm/VMD/Access permission, Preset position call, Position refresh, H.264 recording	
General	Monitor Output (for adjustment)	
	1.0 V [p-p] / 75 Ω, NTSC composite, 1.0 V [p-p] / 75 Ω, PAL composite, ø3.5 mm mini jack, ø3.5 mm mini jack	
General	Microphone/Line Input	
	ø3.5 mm monoaural mini jack, Input impedance: approx. 2 kΩ	
General	Audio Output	
	ø3.5 mm stereo mini jack (monoaural output) Line level Output impedance: Approx. 600 Ω, Line level	
General	External I/O Terminals	
	ALARM IN 1, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT (x1 each)	
General	Safety/EMC Standard	
	UL (UL60065, FCC (Part15 ClassA), CE (EN60065, EN55022 ClassB, C-UL (CAN/CSA C22.2 No.60065), EN55024), GOST (GOST R 51558) DOC (ICES003 ClassA)	
General	Power Source/Consumption	
	12 V DC, PoE (IEEE802.3af compliant) 12 V DC : 690 mA, PoE 48 V : 10 W / 190 mA (Class 0 device)	
General	Ambient Operating Temperature/Humidity	
	-10 °C - +50 °C (14 °F - 122 °F), 90% or less (whitout condensation)	
General	Dimensions	
	ø115 mm x 155 mm (H) (ø4-17/32" x 6-3/32" (H)) (excluding the 12 V DC power cord plug)	
General	Mass (approx.)	
	900 g (1.99 lbs.)	

- *1 The pan/tilt-flip function cannot be activated by clicking live images. When the zoom ratio is adjusted to the "TELE" side, images will be partially hidden even if the pan/tilt-flip function is activated.
- *2 H.264 and MPEG-4 are alternative. *3 [4 : 3] and [16 : 9] are alternative.

Part Names and Functions



Appearance



Trademarks and registered trademarks

- Microsoft, and Windows are registered trademarks of Microsoft Corporation in the U.S. and other countries.
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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.

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