



### 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
- Face detection function detects the position of human face and 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 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*1.....1 pc.	• Decorative Cover.....1 pc.
• Installation Guide.....1 pc.	• Power Cable Plug.....1 pc.
• Code Label*2.....1 pc.	
The followings are for installation.	
• Camera Mount Bracket (w/safety wire).....1 pc.	
• Camera Fixing Screw.....2 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

<b>Inner Dome Cover</b> <b>WV-Q157</b> 	<b>Indoor Dome Covers</b> <b>WV-Q156C</b> (Clear) <b>WV-Q156S</b> (Smoke) 	<b>Embedded Ceiling Mount Brackets</b> <b>WV-Q155C</b> (Clear) <b>WV-Q155S</b> (Smoke) 
<b>Wall Mount Brackets</b> <b>WV-Q154C</b> (Clear) <b>WV-Q154S</b> (Smoke) 	<b>Ceiling Mount Bracket</b> <b>WV-Q105</b> 	

\* Not compatible with optional accessories of conventional cameras

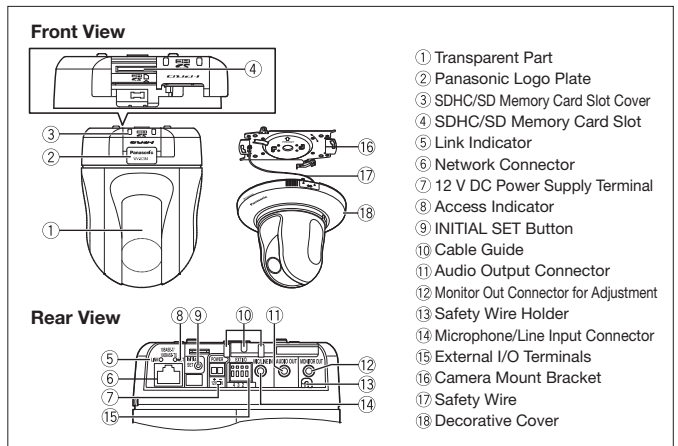
# Specifications

TV System	NTSC	PAL
Camera	1/3 type MOS Sensor	
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. 1/60 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. 1/60 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	4.7 mm ~ 84.6 mm	
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	
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 file 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® 7 Professional 64 bit/32 bit, Microsoft® Windows Vista® Business SP1 32 bit, Microsoft® Windows® XP 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 Professional 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 Professional 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 MPEG-4: 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	
H.264/ MPEG-4 *2	Transmission Mode	Constant bitrate / Framerate priority / Best effort
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	Transmission Type	PULL / PUSH
Audio Compression	0.1 fps ~ 30 fps (JPEG frame rate will be restricted when displaying both JPEG and H.264/MPEG-4 images.)	
Audio Mode	G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps	
Authentication for Audio	OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
Total Bit Rate	Level 1 only / Level 2 higher / All users	
Supported Protocol	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited	
FTP Client	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	
Multi-Screen	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDHC/SD memory card is available.) Up to 16 camera images can be displayed simultaneously on a multi-screen. (Including the camera itself)	

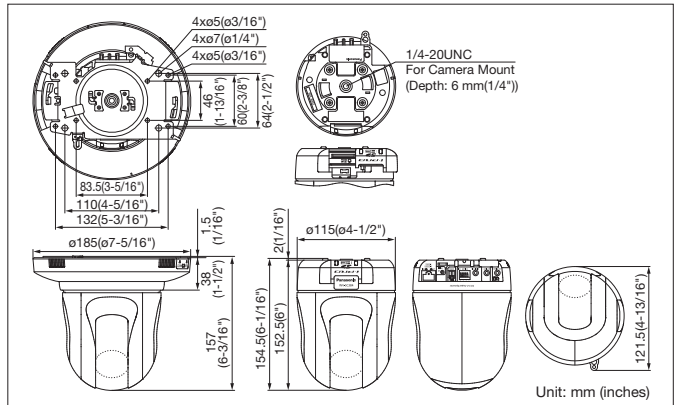
TV System	NTSC	PAL
Network	Maximum Concurrent Access Number SDHC/SD Memory Card (Option) Face Detection Cellular Phone Compatibility	Up to 14 (Depends on network conditions) H.264 recording: Manual REC / Alarm REC (PRE/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC) card: Panasonic 256 MB, 512MB, 1GB, 2 GB, 4 GB*, 8 GB*, 16GB*, 32GB* *SDHC card ON / OFF (with XML notification) JPEG image, panning / tilting / zoom control, AUX control (by access level)
Alarm	Alarm Source Alarm Actions Alarm Log Schedule	3x Terminal inputs, VMD, Command alarm SD memory recording, E-mail notification, Indication on browser, Camera positioning, Preset position 1 ~ 64, FTP image transfer, Terminal output, Panasonic protocol output, Auto track With SD memory card: 5,000 logs, Without SD memory card: 1,000 logs Alarm/VMD/Access permission, Preset position call, Position refresh, H.264 recording
Input / Output	Monitor Output (for adjustment) Microphone/Line Input Audio Output External I/O Terminals	1.0 V [p-p] / 75 Ω, NTSC composite, ø3.5 mm mini jack 1.0 V [p-p] / 75 Ω, PAL composite, ø3.5 mm mini jack ø3.5 mm monaural mini jack, Input impedance: approx. 2 kΩ ø3.5 mm stereo mini jack (monaural output) Line level Output impedance: Approx. 600 Ω, Line level ALARM IN 1, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT (x1 each)
General	Safety/EMC Standard Power Source/Consumption Ambient Operating Temperature/Humidity Dimensions Mass (approx.)	UL (UL60065), FCC (Part15 ClassA), CE (EN60065, EN55022 ClassB, EN55024), GOST (GOST R 51558) DOC (ICES003 ClassA) 12 V DC, PoE (IEEE802.3af compliant) 12 V DC : 690 mA, PoE 48 V : 10 W / 190 mA (Class 0 device) -10 °C ~ +50 °C (14 °F ~ 122 °F), 90% or less (without condensation) ø115 mm x 155 mm (H) (ø4-17/32" x 6-3/32" (H) (excluding the 12 V DC power cord plug) 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

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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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