



HD / 1,280 x 960 H.264 Pan-tilting Network Camera (WV-ST165)

SVGA / 800 x 600 H.264 Pan-tilting Network Camera (WV-ST162)

Key Features

- 720p HD images up to 30 fps (WV-ST165)
- 1.3 Megapixel high sensitivity MOS Sensor
- Super high resolution at SVGA/800 x 600 created by 1.3 Megapixel high sensitivity MOS Sensor (WV-ST162)
- 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 (WV-ST165)
- Full frame (Up to 30 fps) transmission at SVGA (800 x 600) image size (WV-ST162)
- 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.
- High sensitivity with Day & Night (Electrical) function: 0.6 lx (Color), 0.5 lx (B/W) at F2.2
- Digital Noise Reduction: 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.
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Indoor scene (50 Hz) / Indoor scene(60Hz) / ELC (maximum exposure time)
Indoor scene (50 Hz/60Hz): Flicker caused by fluorescent lightning will be automatically compensated.
ELC (maximum exposure time): The lightning control will be automatically performed by adjusting shutter speed in the range of ELC.
- 2x extra zoom at VGA resolution
- 8x digital zoom controlled by browser
- VMD (Video Motion Detection) 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 works with the WJ-ND400 playback VMD function.
- Privacy Zone can mask up to 2 private areas, such as house windows and entrances/exits.
- Camera title display: Up to 20 alphanumeric characters on the browser
- Alarm sources including VMD and Panasonic alarm command can trigger actions such as FTP image transfer, E-mail notification, Indication on browser, and Panasonic alarm protocol output.
- 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 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 images can be transmitted over HTTP protocol.
- Multi-language: English / Italian / French / German / Spanish / Russian / Chinese / Japanese
- IPv4/IPv6 protocol supported
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- Onvif compliant model
- Panning/tilting and Preset Map Shot function realizes wide range monitoring. (Horizontal angle:180° Vertical angle 123°)
- Easy installation: Easy to adjust directions.
- Interactive communication with audio: By using the audio output connector receiving audio from the cameras on a PC and transmitting audio from the PC to the cameras is available.
- Best effort on Transmission priority: In accordance with the network bandwidth, H.264 images will be transmitted with the bit rate varying between the maximum and minimum bit rates that are set for "Max bit rate (per client)".

Standard Accessories

- | | |
|----------------------------------|-------------------------------|
| • Installation Guide 1 pc. | • Flexible Stand1 pc. |
| • CD-ROM*1.....1 pc. | • SD Card Cover1 pc. |
| • Code label*2.....1 pc. | • Power cable plug1 pc. |

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

Specifications

TV System	NTSC	PAL
Camera		
Image Sensor	1/4 type MOS Sensor	
Effective Pixels	Approx. 1.3 megapixels	
Scanning Mode	Progressive	
Scanning Area	3.52 mm (H) x 2.64 mm (V) (7/50" (H) x 1/10" (V))	
Minimum Illumination	Color: 0.6 lx (F2.2, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.038 lx (F2.2, Auto slow shutter: Max. 16/30s, Gain:On(High)) ¹ BW: 0.5 lx (F2.2, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.031 lx (F2.2, Auto slow shutter: Off (16/30s), Gain:On(High)) ¹ BW: 0.031 lx (F2.2, Auto slow shutter: Off (16/30s), Gain:On(High)) ¹	
White Balance	AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K)	
Light Control Mode	Indoor scene (50 Hz / 60 Hz) / ELC	
Shutter Speed	ELC (1/30 s), ELC (3/100 s), ELC (3/120 s), ELC (2/100 s), ELC (2/120 s), ELC (1/100 s), ELC (1/120 s), ELC (1/250 s), ELC (1/500 s), ELC (1/1,000 s), ELC (1/2,000 s), ELC (1/4,000 s), ELC (1/10,000 s)	
Wide Dynamic Range	ON / OFF	
Face Wide Dynamic range	ON / OFF	
Adaptive Black Stretch	ON / OFF	
AGC	ON (HIGH) / ON (MID) / ON (LOW) / OFF	
Electronic Sensitivity UP	OFF (1/30 s), Max. 2/30 s, Max. 4/30 s, Max. 6/30 s, Max. 10/30 s, Max. 16/30 s	
Day & Night(electrical)	OFF / AUTO	
Dynamic Range	24 dB typ. (WDR: ON, Light Control: ELC)	
Digital Noise Reduction	HIGH / LOW	
Video Motion Detection	ON / OFF, 4 areas available	
Privacy Zone	ON / OFF (up to 2 zones available)	
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks) , On/Off	
Lens		
Focal Length	1.95 mm	
Zoom Ratio	Extra zoom: 2x (at VGA resolution)	
Angular Field of View	Horizontal: 85°, Vertical: 68°	
Maximum Aperture Ratio	1 : 2.2	
Focusing Range	0.5 m - ∞	
Pan and Tilt		
Panning Range	-47.5° - +47.5°	
Panning Speed	Manual: Approx. 5°/s - 80°/s, Preset: Up to approx. 80°/s	
Tilting Range	-45° to +10°	
Tilting Speed	Manual: Approx. 5°/s - 80°/s, Preset: Up to approx. 80°/s	
Number of Preset Positions	64	
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	
Map Shot	Preset map-shot	
Browser GUI		
Camera Control	Brightness, AUX ON / OFF	
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, extra zoom(1x - 2x) and the electronic zoom (higher zoom factors, up to 16x).	
Zoom	Up to 20 alphanumeric characters	
Camera Title	Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)	
Clock Display	Reset	
Alarm Control	A still picture will be displayed on a newly opened window.	
One Shot Capture	Mic (Line) input: ON / OFF Volume adjustment: Low / Middle / High, Audio Output: ON / OFF Volume adjustment: Low / Middle / High	
Audio	Still or motion images recorded in the SDHC/SD memory card can be downloaded.	
SD Memory Data Download	English, Japanese, Italian, French, German, Spanish, Chinese, Russian	
GUI/Setup Menu Language	Up to 100 (Internal), Up to 4,000 (SDHC/SD memory when the recording format is set to JPEG.) error logs	
System Log	Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3	
Supported OS ^{2,3}	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	
Supported Browser	10Base-T / 100Base-TX, RJ-45 connector (female)	
Network		
Network IF	WV-ST165: H.264: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps WV-ST162: H.264: 800 x 600 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: 800 x 600 / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps Aspect ratio: [16 : 9] WV-ST165: 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 WV-ST162: H.264: 640 x 360 / 320 x 180, up to 30 fps JPEG: 640 x 360 / 320 x 180, up to 30 fps	
H.264	Constant bitrate / Best effort Frame Rate: 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 Image Quality: LOW / NORMAL / FINE Refresh Interval: 1 fps ~ 30 fps Transmission Type: UNICAST / MULTICAST	
JPEG	10 steps Refresh Interval: 0.1 fps ~ 30 fps Transmission Type: PULL / PUSH	
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, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTCP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP	
FTP Client	Alarm image transmission, FTP periodic transmission	
No. of Simultaneous Users	Up to 14 users (Depends on network conditions)	
SDHC/SD Memory Card (Option)	Manufactured by Panasonic SDHC memory card: 4 GB, 8 GB, 16 GB, 32 GB SD memory card: 256 MB, 512 MB, 1 GB, 2 GB except miniSD card and microSD card)	
Face Detection	ON / OFF (with XML notification)	
Cellular Phone Compatibility	JPEG image, panning/tilting/zoom control, AUX control (by access level)	
Mobile Terminal Compatibility	iPad, iPhone, iPod touch (iOS 4.2.1 or later)	

TV System	NTSC	PAL
Alarm		
Alarm Source	VMD, Command alarm	
Alarm Actions	SDHC/SD memory recording, E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output	
Alarm Log	With SDHC/SD memory card: 5,000 logs, without SDHC/SD memory card: 1,000 logs	
Schedule	VMD	
Input/ Output		
Monitor Output (for adjustment)	VBS: 1.0 V [p-p]/75 Ω NTSC composite, ø3.5 mm mini jack	VBS: 1.0 V [p-p]/75 Ω PAL composite, ø3.5 mm mini jack
Microphone/Line Input	ø3.5 mm monaural mini jack, Input impedance: Approx. 2.2 kΩ	
For microphone input	Applicable microphone: Plug-in power type, Supply voltage: 3.3 V ±0.5 V	
For line input	Input level: Approx. -10 dBV	
Audio Compression	ø3.5 mm stereo mini jack (monaural output), Output impedance: Approx. 560 Ω, Line level	
External I/O Terminals	ALARM IN 1, ALARM IN 2/ ALARM OUT, ALARM IN 3/ AUX OUT, GND, 12 V DC	
General		
Safety/EMC Standard	UL (UL60950-1), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60950-1), DOC (ICES003 ClassA)	CE, IEC60950-1 (EN55022 ClassB, EN55024)
Power Source and Power Consumption	PoE (IEEE802.3af compliant), 12V DC PoE: 130 mA (Class 2 device), 12 V DC: 430 mA	
Ambient Operating Temperature	0 °C ~ +40 °C (32 °F ~ 104 °F)	
Ambient Operating Humidity	Less than 90 % (no condensation)	
Dimensions	100 mm (W) x 100 mm (H) x 74 mm (D) (3-47/50" x 3-47/50" (H) x 2-23/25") (excluding projection)	
Mass (approx.)	Main body 345 g (0.76 lbs.)	
Finish	Main body: PC/ABS resin, sail white Dome section: Clear polycarbonate resin	

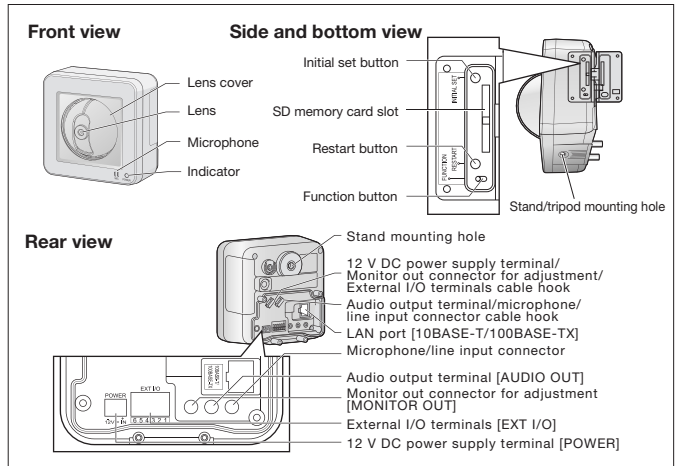
¹ Converted value

² Refer to "Notes on Windows Vista® / Windows® 7" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.

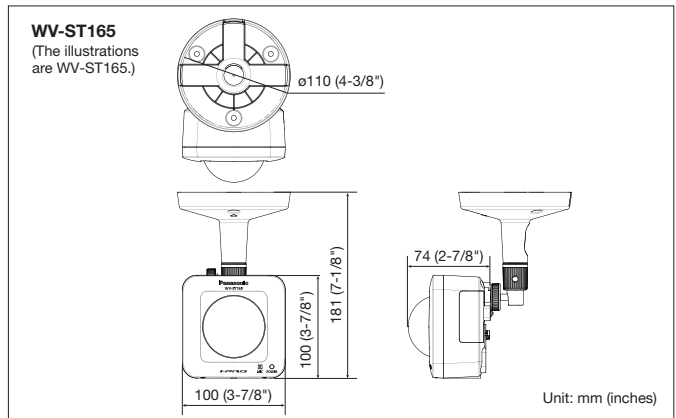
³ When using IPv6 for communication, use Microsoft® Windows® 7 or Microsoft® Windows Vista®.

⁴ Transmission for 2 streams can be individually set in the same compression method.

Part Names and Functions



Appearance



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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.

- Masses and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.

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