



VGA / 640 x 480 H.264 Network Camera

Key Features

- 0.32 Megapixel high sensitivity CMOS 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 VGA (640 x 480) image size
- High sensitivity with Day & Night (Electrical) function: 0.9 lx (Color), 0.6 lx (B/W) at F2.8
- 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 8x) / OFF
- Selectable light control modes: Indoor scene (50 Hz) / Indoor scene (60 Hz) / 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.
- 4x 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.
- 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.
- 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
- Smartphone monitoring : Direct camera control from smartphone
- PC software recording (BB-HNP17: Network Camera Recorder with Viewer Software)

Standard Accessories

- | | | | |
|--|-------|-----------------------------|-------|
| • Flexible Stand | 1 pc. | • Installation Guide | 1 pc. |
| • AC Adaptor | 1 pc. | • CD-ROM ¹ | 1 pc. |
| • Configure the settings of the camera | 1 pc. | | |

¹The CD-ROM contains the operating instructions and different kinds of tool software programs.

Specifications

Camera	Image Sensor	1/5 type CMOS Sensor	
	Effective Pixels	Approx. 0.32 megapixels	
	Scanning Mode	Progressive	
	Scanning Area	2.69 mm (H) x 2.02 mm (V) [1/8 inches (H) x 1/16 inches (V)]	
	Minimum Illumination	Color: 0.9 lx (F2.8, Auto slow shutter: Off (1/30s), Gain:On(High)) ^{*1} Color: 0.11 lx (F2.8, Auto slow shutter: Max. 8/30s, Gain:On(High)) ^{*1} BW: 0.6 lx (F2.8, Auto slow shutter: Off (1/30s), Gain:On(High)) ^{*1} BW: 0.08 lx (F2.8, Auto slow shutter: Off (8/30s), 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 (60 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 (1/8,000 s)	
	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. 3/30 s, Max. 4/30 s, Max. 8/30 s	
	Day & Night (electrical)	OFF / AUTO	
	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	2.7 mm
Angular Field of View		Horizontal: 53°, Vertical: 40.5°	
Maximum Aperture Ratio		1 : 2.8	
Focusing Range		0.5 m - ∞	
Browser GUI	Camera Control	Brightness	
	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.	
	Zoom	electronic zoom (up to 4x).	
	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.	
	GUI/Setup Menu Language	English / Italian / French / German / Spanish / Russian / Chinese / Japanese	
	System Log	Up to 100 (Internal), error logs	
	Supported OS ^{*4-5}	Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3	
	Supported Browser	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 (female)	
	Image Resolution ^{*6}	Aspect ratio: [4 : 3]	H.264: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps
		Aspect ratio: [16 : 9]	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	Transmission Mode: Constant bitrate / Frame rate / Best effort Frame Rate: 1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps Bit Rate/Cient: 64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4096 Image Quality: LOW / NORMAL / FINE Refresh Interval: 1 fps - 30 fps Transmission Type: UNICAST / MULTICAST
	JPEG	Image Quality	10 steps
		Refresh Interval	0.1 fps - 30 fps
	Supported Protocol	Transmission Type	PULL / PUSH
		FTP Client	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, RTSP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP
	Alarm	Alarm Source	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, RTSP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP
		Alarm Actions	Alarm image transmission, FTP periodic transmission
		Face Detection	Up to 14 users (Depends on network conditions)
		Schedule	ON / OFF (with XML notification) VMD, Command alarm E-mail notification, indication on browser, FTP image transfer, Panasonic protocol output VMD
	General	Safety/EMC Standard	BL-VP101: <Safety> UL60950-1 Ed.2, C22.2 NO.60950-1 Ed.2 <EMC> FCC Part15 ClassB, ICES-003 ClassB BL-VP101E / BL-VP101U: <Safety> IEC60950-1 Ed.2 <EMC> EN55022 ClassB, EN55024
Power Source and Power Consumption		6.5 V DC (Use only with Panasonic AC adapter) BL-VP101/VP101E/VP101U: max. 1.8 W	
Ambient Operating Temperature		0 °C - 40 °C (32 °F - 104 °F)	
Ambient Operating Humidity		Less than 90 % (no condensation)	
Dimensions		70 mm (W) x 70 mm (H) x 25.4 mm (D) [2-3/4 inches (W) x 2-3/4 inches (H) x 1 inch (D)] (excluding projection)	
Mass (approx.)		Approx. 75 g (0.17 lbs)	
Finish		Main body: ABS resin, white	

*1 Converted value

*2 The actual line speed may be different depending on the network environment and the wireless devices connected.

*3 Depending on the wireless router (wireless access point) used, connections may not possible between the camera and the wireless router.

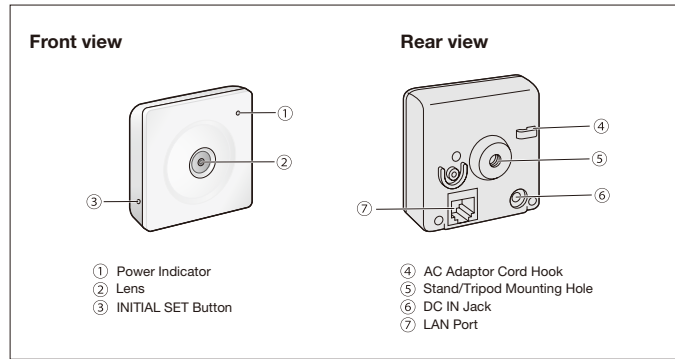
When connecting with 802.11n, select WPA-PSK (AES) or WPA2-PSK (AES) for security.
*4 Refer to "Notes on Windows Vista® / Windows® 7" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.

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

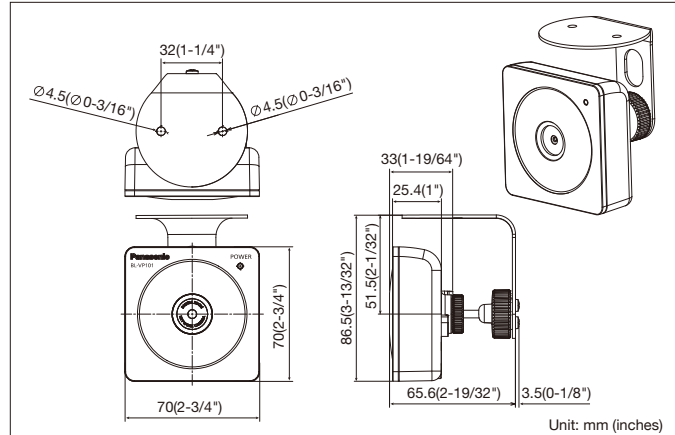
*6 Transmission for 2 streams can be individually set in the same compression method.

*7 For further information about compatible devices, refer to our website (<http://panasonic.net/pss/security/support/info.html>).

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.
- iPad, iPhone and iPod touch are registered trademarks of Apple Inc.
- UniPhier is a registered trademark of Panasonic Corporation.
- "Super Dynamic", "SDII", "SDIII", "SD5", "SD6", "SD5Link" logos are trademarks or registered trademarks of Panasonic Corporation.
- ONVIF and the ONVIF logo are trademarks of ONVIF Inc.

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.

DISTRIBUTED BY:

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Printed in Japan (2A-094L)



HD / 1,280 x 720 H.264 Wireless Network Camera (BL-VP104W)

HD / 1,280 x 720 H.264 Network Camera (BL-VP104)

Key Features

- 720p HD images up to 30 fps
- 1.0 Megapixel high sensitivity CMOS 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 720 image size
- High sensitivity with Day & Night (Electrical) function: 0.9 lx (Color), 0.6 lx (B/W) at F2.8
- 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 (60 Hz) / 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.
- 1.5x extra zoom under VGA resolution
- 4x 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.
- 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.
- 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
- Smartphone monitoring : Direct camera control from smartphone
- Wireless LAN function (IEEE802.11 n/b/g) : Camera images can be monitored over a wireless router. (BL-VP104W)
- WPS (Wi-Fi Protected Setup) function : WPS enables the camera to automatically obtain the connection configuration information and the security configuration information of the wireless router. WPS can be configured by pressing the WIRELESS button (WPS indicator) (PBC method) or entering an 8 digit pin code (Pin code method). (BL-VP104W)
- PC software recording (BB-HNP17: Network Camera Recorder with Viewer Software)

Standard Accessories

- | | | | |
|--|-------|-----------------------------|-------|
| • Flexible Stand | 1 pc. | • Installation Guide | 1 pc. |
| • AC Adaptor | 1 pc. | • CD-ROM ¹ | 1 pc. |
| • Configure the settings of the camera | 1 pc. | | |

¹The CD-ROM contains the operating instructions and different kinds of tool software programs.

Specifications

	BL-VP104W	BL-VP104			
Camera	Image Sensor	1/4 type CMOS Sensor			
	Effective Pixels	Approx. 1 megapixel			
	Scanning Mode	Progressive			
	Scanning Area	3.89 mm (H) x 2.43 mm (V) {5/32 inches (H) x 3/32 inches (V)}			
	Minimum Illumination	Color: 0.9 lx (F2.8, Auto slow shutter: Off (1/30s), Gain:On(High)) ¹			
		Color: 0.06 lx (F2.8, Auto slow shutter: Max. 16/30s, Gain:On(High)) ¹			
		BW: 0.6 lx (F2.8, Auto slow shutter: Off (1/30s), Gain:On(High)) BW: 0.04 lx (F2.8, 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)			
	Adaptive Black Stretch	ON / OFF			
	AGC	ON (HIGH) / ON (MID) / ON (LOW) / OFF			
	Electronic Sensitivity UP Day & Night (electrical)	OFF (1/30 s), Max. 2/30 s, Max. 4/30 s, Max. 6/30 s, Max. 10/30 s, Max. 16/30 s			
	Digital Noise Reduction	OFF / AUTO			
	Video Motion Detection	HIGH / LOW			
Privacy Zone	ON / OFF (4 areas available)				
Camera Title (OSD)	ON / OFF (up to 2 zones available)				
Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks), On/Off				
Lens	Focal Length	3.6 mm			
	Zoom Ratio	Extra zoom: 1.5x (at VGA resolution)			
	Angular Field of View	Horizontal: 57°, Vertical: 34°			
	Maximum Aperture Ratio	1 : 2.8			
	Focusing Range	0.4 m ~ ∞			
	Wireless (BL-VP104W/ BL-VP104WE/ BL-VP104WU only)	Antenna	1x1 (Diversity)		
		Transmission method	SISO (Single Input/ Single Output) -OFDM, OFDM, DSSS		
		Frequency range (center frequency)/ Channel	BL-VP104W: 2.412 GHz - 2.462 GHz (1 - 11ch) BL-VP104WE: 2.412 GHz - 2.472 GHz (1 - 13ch) BL-VP104WU: 2.412 GHz - 2.472 GHz (1 - 13ch)		
		Data transfer rate: ²	IEEE802.11n: 6.5 - 72.2 Mbps IEEE802.11g: 6 - 54 Mbps IEEE802.11b: 1 - 11 Mbps		
		Access method	Infrastructure mode		
Authentication method		Open System			
Security: ³		WPA/WPA2-PSK (TKIP/AES) WEP (64 bit/128 bit)			
WPS		PBC method (push button method), PIN method (PIN code method)			
Camera Control		Brightness			
Browser 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.		
	Zoom	extra zoom(1x - 1.5x) and the electronic zoom (higher zoom factors, up to 6x).			
	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.			
	GUI/Setup Menu Language	English, Italian, French, German, Spanish, Russian, Chinese, Japanese			
	System Log	Up to 100 (Internal), error logs			
	Supported OS: ^{4,5}	Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3			
	Supported Browser	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 (female)		
		Image Resolution ⁶	Aspect ratio:	H.264: SVGA(800 x 600) / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps	
			[4 : 3]	JPEG: SVGA(800 x 600) / VGA (640 x 480) / QVGA (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: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps	
		H.264	Transmission Mode	Constant bitrate / Frame rate / 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		Refresh Interval	LOW / NORMAL / FINE		
		Transmission Type	1 fps ~ 30 fps		
		Transmission Type	UNICAST / MULTICAST		
JPEG		Image Quality	10 steps		
		Refresh Interval	0.1 fps ~ 30 fps		
		Transmission Type	PULL / PUSH		
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, RTP/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)				
Face Detection	ON / OFF (with XML notification)				
Cellular Phone Compatibility	JPEG image				
Mobile Terminal Compatibility ⁷	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ mobile terminals				
Alarm	Alarm Source	VMD, Command alarm			
	Alarm Actions	E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output			
	Schedule	VMD			

	BL-VP104W	BL-VP104	
General	Safety/ EMC Standard	BL-VP104W: <Safety> UL60950-1 Ed.2, C22.2 NO.60950-1 Ed.2 <EMC> FCC Part15 ClassB <Wireless> FCC Part15C	BL-VP104: <Safety> UL60950-1 Ed.2, C22.2 NO.60950-1 Ed.2 <EMC> FCC Part15 ClassB, ICES-003 ClassB
		BL-VP104WE / BL-VP104WU: <Safety> IEC60950-1 Ed.2 <EMC> EN55022 ClassB, EN55024 <Wireless> EN300 328	BL-VP104E / BL-VP104U: <Safety> IEC60950-1 Ed.2 <EMC> EN55022 ClassB, EN55024
	Power Source and Power Consumption	6.5 V DC (Use only with Panasonic AC adapter) BL-VP104W: max. 3.5W (120 V AC/ 60 Hz) BL-VP104WE: max. 3.5 W (230 V AC/ 50 Hz) BL-VP104WU: max. 3.5 W (230 V AC/ 50 Hz)	6.5 V DC (Use only with Panasonic AC adapter) BL-VP104: max. 2.0W (120 V AC/ 60 Hz) BL-VP104E: max. 2.0 W (230 V AC/ 50 Hz) BL-VP104U: max. 2.0 W (230 V AC/ 50 Hz)
		Ambient Operating Temperature	0 °C ~ 40 °C (32 °F ~ 104 °F)
	Ambient Operating Humidity	Less than 90 % (no condensation)	
	Dimensions	70 mm (W) x 70 mm (H) x 25.4 mm (D) (2-3/4 inches (W) x 2-3/4 inches (H) x 1 inch (D)) (excluding projection)	
	Mass (approx.)	Approx. 80 g (0.18 lbs) Approx. 75 g (0.17 lbs)	
	Finish	Main body: ABS resin, white	

¹ Converted value

² The actual line speed may be different depending on the network environment and the wireless devices connected.

³ Depending on the wireless router (wireless access point) used, connections may not possible between the camera and the wireless router.

When connecting with 802.11n, select WPA-PSK (AES) or WPA2-PSK (AES) for security.

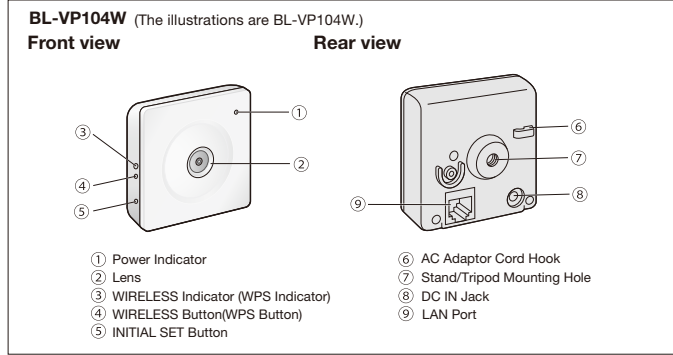
⁴ Refer to "Notes on Windows Vista® / Windows® 7" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 7 or Microsoft® Windows Vista®.

⁵ When using IPv6 for communication, use Microsoft® Windows® 7 or Microsoft® Windows Vista®.

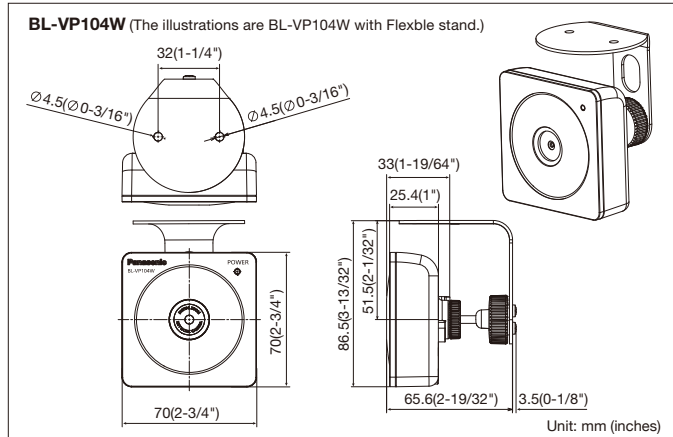
⁶ Transmission for 2 streams can be individually set in the same compression method.

⁷ For further information about compatible devices, refer to our website (<http://panasonic.net/pss/security/support/info.html>).

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- "Super Dynamic", "SDII", "SDIII", "SD5", "SD6", "SD5Link" logos are trademarks or registered trademarks of Panasonic Corporation.
- ONVIF and the ONVIF logo are trademarks of ONVIF Inc.

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

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Printed in Japan (2A-095L)



HD / 1,280 x 720 Pan-tilt Wireless Network Camera (BL-VT164W)

HD / 1,280 x 720 Pan-tilt Network Camera (BL-VT164)

Key Features

- 720p HD images up to 30 fps
- 1.0 Megapixel high sensitivity CMOS 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 720 image size
- High sensitivity with Day & Night (Electrical) function: 0.9 lx (Color), 0.6 lx (B/W) at F2.8
- 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 (60 Hz) / 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.
- 1.5x extra zoom under 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.
- 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.
- 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
- Low profile design for discrete installation
- Pan/tilt and Preset Map Shot function realizes wide range monitoring..(Horizontal angle:139° Vertical angle 76°)
- Easy installation: Easy to adjust directions.
- Interactive communication with audio: By using the audio output connector and the microphone in connector, receiving audio from the cameras on a PC and transmitting audio from the PC to the cameras is available.
- Smartphone monitoring : Direct camera control from smartphone
- Wireless LAN function (IEEE802.11 n/b/g) : Camera images can be monitored over a wireless router.(BL-VT164W)
- WPS (Wi-Fi Protected Setup) function : WPS enables the camera to automatically obtain the connection configuration information and the security configuration information of the wireless router. WPS can be configured by pressing the WIRELESS button (WPS indicator) (PBC method) or entering an 8 digit pin code (Pin code method).(BL-VT164W)
- Built-in Body Heat Sensor (Pyroelectric infrared sensor)
- PC software recording (BB-HNP17: Network Camera Recorder with Viewer Software)

Standard Accessories

- | | | | |
|--|-------|-----------------------------|-------|
| • AC Adaptor | 1 pc. | • Installation Guide | 1 pc. |
| • Safety Wire | 1 pc. | • CD-ROM ¹ | 1 pc. |
| • Configure the settings of the camera | 1 pc. | | |

¹The CD-ROM contains the operating instructions and different kinds of tool software programs.

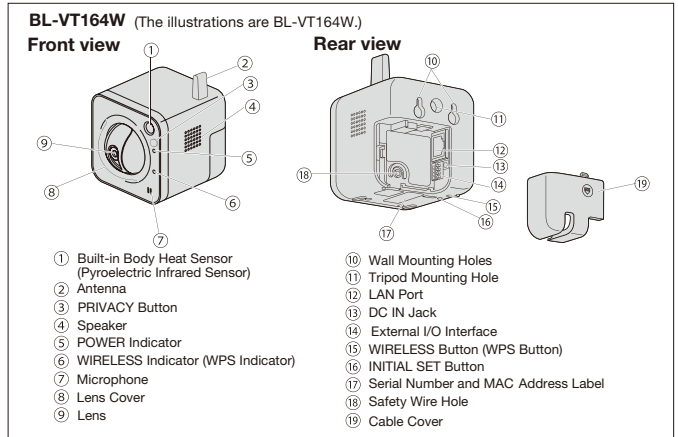
Specifications

	BL-VT164W	BL-VT164		
Camera	Image Sensor	1/4 type CMOS Sensor		
	Effective Pixels	Approx. 1 megapixels		
	Scanning Mode	Progressive		
	Scanning Area	3.89 mm (H) x 2.43 mm (V) {5/32 inches (H) x 3/32 inches (V)}		
	Minimum Illumination	Color: 0.9 lx (F2.8, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.06 lx (F2.8, Auto slow shutter: Max. 16/30s, Gain:On(High)) ^{*1} BW: 0.6 lx (F2.8, Auto slow shutter: Off (1/30s), Gain:On(High)) BW: 0.04 lx (F2.8, 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 (60 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)		
	Adaptive Black Stretch	ON / OFF		
	AGC	ON (HIGH) / ON (MID) / ON (LOW) / OFF		
	Electronic Sensitivity UP Day & Night (electrical)	OFF (1/30 s), Max. 2/30 s, Max. 4/30 s, Max. 6/30 s, Max. 10/30 s, Max. 16/30 s		
	Digital Noise Reduction	OFF / AUTO		
	Video Motion Detection	HIGH / LOW		
	Privacy Zone	ON / OFF (available at each preset)		
	Camera Title (OSD)	ON / OFF (up to 2 zones available)		
	Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks), On/Off		
Lens	Focal Length	3.6 mm		
	Zoom Ratio	Extra zoom: 1.5x (at VGA resolution)		
	Angular Field of View	Horizontal: 57°, Vertical: 34°		
	Maximum Aperture Ratio	1 : 2.8		
Pan and Tilt	Focusing Range	0.4 m ~ ∞		
	Panning Range	-41° ~ +41°		
	Panning Speed	Manual: Approx. 0.5 °/s - 50 °/s, Preset: Up to approx. 50 °/s		
	Tilting Range	-32° to +10°		
	Tilting Speed	Manual: Approx. 0.5 °/s - 50 °/s, Preset: Up to approx. 50 °/s		
	Number of Preset Positions	64		
Wireless (BL-VT164W/ BL-VT164WE/ BL-VT164WU only)	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		
	Antenna	1x1 (Diversity)		
	Transmission method	SSB Single Input/Single Output, OFDM, OFDM-DSSS		
	Frequency range (center frequency) / Channel	BL-VT164W: 2.412 GHz - 2.462 GHz (1 - 11ch) BL-VT164WE: 2.412 GHz - 2.472 GHz (1 - 13ch) BL-VT164WU: 2.412 GHz - 2.472 GHz (1 - 13ch)		
	Data transfer rate: ^{*2}	IEEE802.11n: 65-72.2 Mbps IEEE802.11g: 6-54 Mbps IEEE802.11b: 1-11 Mbps		
	Access method	Infrastructure mode		
	Authentication method	Open System		
	Security: ^{*3}	WPA/WPA2-PSK (TKIP/AES) WEP (64 bit/128 bit)		
WPS	PBC method (push button method), PIN method (PIN code method)			
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.		
	Zoom	extra zoom(1x-1.5x) and the electronic zoom (higher zoom factors, up to 12x).		
	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 Input: ON / OFF Volume adjustment: Low / Middle / High, Audio Output: ON / OFF Volume adjustment: Low / Middle / High		
	GUI/Setup Menu Language	English, Japanese, Italian, French, German, Spanish, Chinese, Russian		
	System Log	Up to 100 (Internal), error logs		
Network	Supported OS ^{*4}	Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3		
	Supported Browser	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 IF	10Base-T / 100Base-TX, RJ-45 connector (female)		
	Image Resolution ^{*5}	Aspect ratio: [4 : 3] H.264: SVGA(800 x 600) / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: SVGA(800 x 600) / VGA (640 x 480) / QVGA (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: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps		
	H.264	Transmission Mode	Constant bitrate / Frame rate / 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	Image Quality	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 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, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/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)			
Face Detection	ON / OFF (with XML notification)			
Cellular Phone Compatibility	JPEG image, panning/tilting/zoom/Privacy control, AUX control (by access level)			
Mobile Terminal Compatibility ^{*7}	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android™ mobile terminals			
Alarm	Alarm Source	3x Terminal inputs, VMD, Command alarm, Body heat sensor		
	Alarm Actions	E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output		
Body heat sensor	Schedule	VMD, Body heat sensor		
	Sensor detection method	pyroelectric infrared sensor		
	Sensitivity settings	Off/ High/ Normal/ Low/ Extra low		
Sensor detection range	About 5 m (with the temperature at 20°C and Normal sensitivity) Horizontal: 28°, Vertical: 71°			
Input/Output	Microphone/Line Input	Internal microphone		
	Audio Output	Internal speaker		
	External I/O Terminals	ALARM IN 1, ALARM IN 2/ ALARM OUT, ALARM IN 3/ AUX OUT, GND		

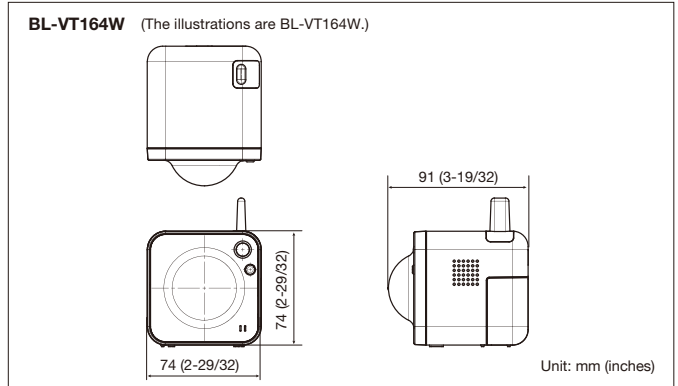
General	BL-VT164W	BL-VT164
Safety/ EMC Standard	BL-VT164W: <Safety> UL60950-1 Ed.2, C22.2 NO.60950-1 Ed.2 <EMC> FCC Part15 ClassB <Wireless> FCC Part15C	BL-VT164: <Safety> UL60950-1 Ed.2, C22.2 NO.60950-1 Ed.2 <EMC> FCC Part15 ClassB, ICES-003 ClassB
	BL-VT164WE/BL-VT164WU: <Safety> IEC60950-1 Ed.2 <EMC> EN55022 ClassB, EN55024 <Wireless> EN300328	BL-VT164E/BL-VT164U: <Safety> IEC60950-1 Ed.2 <EMC> EN55022 ClassB, EN55024
Power Source and Power Consumption	9 V DC (Use only with Panasonic AC adapter) BL-VT164W: max. 4.8 W (120 V AC/ 60 Hz) BL-VT164WE: max. 4.8 W (230 V AC/ 50 Hz) BL-VT164WU: max. 4.8 W (230 V AC/ 50 Hz)	9 V DC (Use only with Panasonic AC adapter) BL-VT164: max. 3.7 W (120 V AC/ 60 Hz) BL-VT164E: max. 3.7 W (230 V AC/ 50 Hz) BL-VT164U: max. 3.7 W (230 V AC/ 50 Hz)
Ambient Operating Temperature	0 °C ~ 40 °C (32 °F ~ 104 °F)	
Ambient Operating Humidity	Less than 90 % (no condensation)	
Dimensions	74 mm (W) x 74 mm (H) x 91 mm (D) (2-29/32 inches (W) x 2-29/32 inches (H) x 3-19/32 inches (D)) (excluding projection)	
Mass (approx.)	Approx. 230 g (0.5071 lbs)	
Finish	Main body: ABS resin, white Dome section: Clear polycarbonate resin	

- *1 Converted value
- *2 The actual line speed may be different depending on the network environment and the wireless devices connected.
- *3 Depending on the wireless router (wireless access point) used, connections may not possible between the camera and the wireless router.
When connecting with 802.11n, select WPA-PSK (AES) or WPA2-PSK (AES) for security.
- *4 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®.
- *5 When using IPv6 for communication, use Microsoft® Windows® 7 or Microsoft® Windows Vista®.
- *6 Transmission for 2 streams can be individually set in the same compression method.
- *7 For further information about compatible devices, refer to our website (<http://panasonic.net/pss/security/support/info.html>).

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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