

Panasonic

ideas for life

Home Network Cameras
Wired Type **BL-C210**
Indoor Use Only

Viewnetcam.com
Access www.viewnetcam.com for registration information

Save Your Worries with Remote Monitoring by Panasonic Home Network Camera

Do you sometimes worry about things at home while you're at work or on vacation? Panasonic network cameras let you monitor your room over the Internet from wherever you are. They even notify you by e-mail when they detect moving objects. And you can choose the video format to match the Internet connection and your viewing needs. Let Panasonic network cameras keep an eye on things - anytime, anywhere - so you can relax and enjoy yourself.



Monitoring various locations



Entrance



Kid's room



Pet activity

See There
When You Can't Be There

System Diagram

Panasonic network cameras support UPnP and DDNS, so it's easy to set up the network and access cameras over the Internet with an ID and password.



Feel Safer with Panasonic



Connection

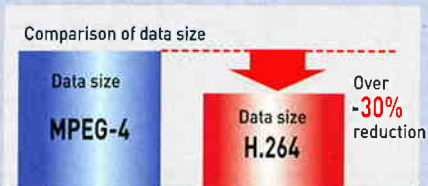
External Input

Sensors and switches can be connected to the camera through two external input ports.



Data transmission / H.264 adopted

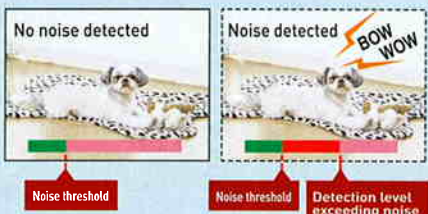
The adoption of H.264/ACV has enabled reduction of data volume by more than 30% compared to MPEG-4 when transmitting data of the same image quality.



Capture

Alerting Yourself when Changes Occur

The camera's built-in microphone collects peripheral noise and when camera detects the noise exceeding the threshold it stores the image captured. This is a newly added function.



Capture

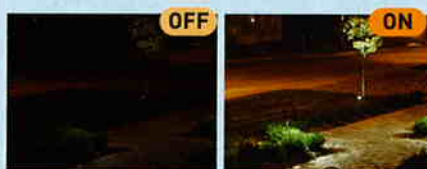
Turning privacy mode on

With privacy mode you can shut the camera lens and protect yourself from unwanted exposure. Operation is simple - you only need to push the privacy button.



Colour Night View Mode*1

When the subject darkens, the camera automatically adjusts the brightness to show you the image. You can see clear, easy-to-view images even in the dark.

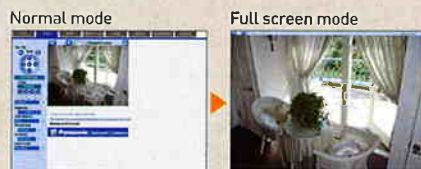


*1 The image tends to blur more than that in standard mode when viewing a moving subject in low light. When viewing a dark subject in Colour night view mode, spots of white or Coloured light may appear in the image. Some subjects may require additional time for focusing with the auto focus function.

View

Full Screen Display

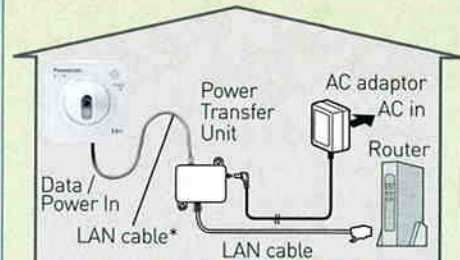
The monitoring image is easier to see because it fills the entire screen.



Others

Power supply via LAN cable

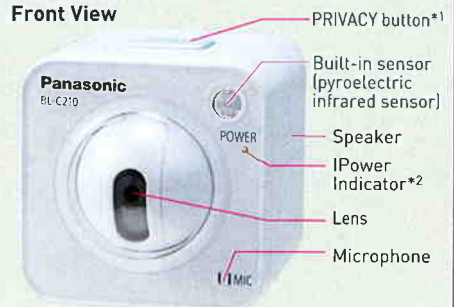
The included Power Transfer Unit supplies the camera the power through the LAN cable. It allows you to install the camera anywhere, like on the ceiling where no power outlet is.



*Use a LAN cable that is no more than 30 m (98 feet 5 inches) long to connect the camera and the power transfer unit.
*Use a LAN cable that is no more than 100 m (328 feet 1 inches) long to connect the camera and the router.

Part Names

BL-C210 Front View



*Use a LAN cable that is no more than 30 m (98 feet 5 inches) long to connect the camera and the power transfer unit.
*1 Privacy mode allows you to protect your privacy by hiding the lens inside the camera.
*2 See 1.1 Understanding the Camera Indicator in the Troubleshooting Guide on the CD-ROM for indicator meaning.

Rear View



Specifications [BL-C210]

Network camera		Server	
Viewing Angle	58° horizontal 45° Vertical	Image compression*1	H.264, MPEG-4, Motion JPEG for moving image display
Sensor Type	1/4 inch CMOS Progressive Scan, approx. 320,000 pixels	Video resolution	H.264: 640 x 480, 320 x 240 MPEG-4: 640 x 480, 320 x 240, 192 x 144 JPEG: 640 x 480, 320 x 240, 192 x 144
Lens focal point	Fixed (focal range: 0.3 m to ∞)	Frame rate*2	Max. 30 frames/sec. (640 x 480, 320 x 240, 192 x 144)
Aperture (F No.)	F2.8	Security	User ID / Password/SSL
Illuminance	5-10,000 lx (3-10,000 lx when in Colour Night View mode)	Supported protocols	IPv4 / IPv6 Dual-Stack IPv4: TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, ARP, ICMP, POP3, NTP, UPnP-TM, Auto IP, SMTP Authentication, RTP, RTSP, RTCP IPv6: TCP, UDP, IP, HTTP, FTP, SMTP, DNS, ICMPv6, POP3, NDP, NTP, RTP, RTSP, RTCP
Terminal		User access limit	2/H.264, 4/MPEG-4, 10/MotionJPEG
Network interface	Ethernet (10Base-T/100Base-TX)	Buffered images	Approx. 1160 images (320 x 240) -Standard image quality -with time display
External interface	Input (2)	Image transfer method	SMTP*3, FTP, HTTP
General		Image buffer/transfer triggers	Timer, Sensor, Alarm 1, Alarm 2, Motion Detection, Sound Detection
Operating Temperature	0°C to +40°C (+32°F to +104°F)		
Operating humidity	20% to 80%		
Dimensions (H x W x D)	74mm x 74mm x 91mm (2 15/16 inches x 2 15/16 inches x 3 9/16 inches)		
Weight (only the unit)	230 g (1.09lb.)		
Power Supply	AC adaptor: input 100 - 240 V AC, Output 9V DC 750mA		
Consumption	AC adaptor: 5.4W		

*1 H.264 and MPEG-4 cannot browse at the same time.
*2 The frame rate may slow down depending on the network environment, PC performance, image quality, memory recording, when Colour night view mode is activated, etc.
*3 The camera supports POP Before SMTP Authentication and SMTP Authentication. PLAIN, LOGIN, and CRAM-MD5 SMTP Authentication are supported. SSL supports SMTP over SSL. STARTTLS is not supported.

Panasonic

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REPLACE
C1E & C2OE

Home Network Cameras

Wired Type **BL-C101**

Wireless Type **BL-C121**
Indoor Use Only

Viewnetcam.com
Access www.viewnetcam.com for registration information.



* This logo mark is issued by the IPv6 Ready Logo Program Committee, an IPv6 promotion group established mainly by the IPv6 Forum.

Keep an Eye on the House from Anywhere even over the Cell phone!

Do you sometimes worry about things at home while you're at work or on vacation? Panasonic network cameras let you monitor your room over the Internet from wherever you are. They even notify you by e-mail when they detect moving objects. And you can choose the video format to match the Internet connection and your viewing needs. Let Panasonic network cameras keep an eye on things - anytime, anywhere - so you can relax and enjoy yourself.



BL-C121

Monitoring various locations



Entrance



Kid's room



Pet activity

See There
When You Can't Be There

System Diagram

Panasonic network cameras support UPnP and DDNS, so it's easy to set up the network and access cameras over the Internet with an ID and password.



Feel Safer with Panasonic



Installation

External I/O

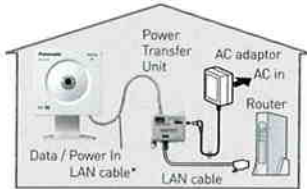
The external I/O is connectable to various sensors and switches, which can be interlocked with the cameras.

(Note: For BL-C101 only input connector is available)



Power Supply via LAN cable (BL-C101)

The included Power Transfer Unit supplies the camera the power through the LAN cable. It allows you to install the camera anywhere, like on the ceiling where no power outlet is.



*Use LAN cable of length 30m (98 feet 5 inches) or less to connect the camera and the power transfer unit.

Wireless Communication (BL-C121)

Install the camera anywhere*1 with no transmission cables to connect, and enjoy high-speed communications at 2.4 GHz, 54 Mbps*2 (IEEE 802.11g) or 2.4 GHz, 11 Mbps*2 (IEEE 802.11b).

*1 Cannot be used in bathrooms or outdoors.

*2 The indicated speed is the maximum theoretical value of the wireless LAN specification, and does not denote the actual data transfer speed achieved by the cameras.

Connect

SSL support

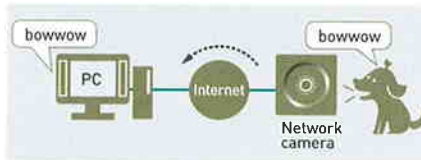
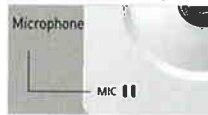
Image/voice data is sent in encrypted form, making it very difficult for someone else to "eavesdrop" on the network.



Control

Built-in Microphone

Sounds picked up by the built-in microphone can be heard through the PC. Video monitoring with sound enhances security by providing additional information that images cannot convey.



Capture

Motion Detection Function

This function detects changes by reacting to a camera threshold or sensitivity that is set in advance on the PC. Captured images can also be stored temporarily in the camera*3 or sent to you by e-mail*4 or FTP data transfer*5.

*3 A maximum of approximately 250 images (320 x 240 pixels) can be stored in the camera.

*4 POP before SMTP authentication and SMTP authentication (PLAIN, LOGIN and CRAM-MD5) are supported.

*5 The sensor's detection history can also be e-mailed to you once a day at a preset time.



Detection Notification Sound

While viewing MJPEG images on the single or multi-camera screens, your computer can play a sound to notify you when motion is detected or the external sensor is triggered. This feature can be set independently on each computer that accesses the camera.



Monitor

Simultaneous MPEG-4*6 and JPEG

Cameras simultaneously send MPEG-4*6 images and JPEG images. MPEG-4 is recommended for viewing smooth motion images, and JPEG is recommended for recording higher quality images.

*6 MPEG-4 is not applicable on a cell phone

MPEG-4 Visual License

When installing the MPEG-4 viewer program on additional PCs, please purchase additional licenses. (Model No. BB-HCA5A for USA, BB-HCA5CE for others)

Full Screen Display

The monitoring image is easier to see because it fills the entire screen.

Normal mode



Full screen mode



Multi-camera capability



Cell Phone Monitoring



*Up to 16 windows can be viewed at once

Part Names (The picture is BL-C121.)



*1 Available only for BL-C121.

*2 For BL-C101 power is also supplied via LAN cable.

*3 For BL-C101 only input connector is available.

Specifications [BL-C101 / 121]

	BL-C121	BL-C101		BL-C121	BL-C101		BL-C121	BL-C101
Camera			Server			Wireless		
Zoom	10x digital zoom (by areal)		Image compression	JPEG (Motion JPEG for moving image display), MPEG-4		Standard	IEEE 802.11b, 802.11g, 802.11g exclusive	-
Viewing angle	58° horizontal, 45° vertical		Video resolution	640 x 480, 320 x 240 (default), 192 x 144		Antenna	Diversity	-
Sensor type	1/4 inch CMOS sensor, approx. 320,000 pixels		Image quality	JPEG (favor clarity, standard, favor motion), MPEG-4		Number of channel	BL-C121A: 11ch (1-11) BL-C121CE/E: 13ch (1-13)	-
Focus	Fixed (focal range: 0.3 m to ∞)		Frame rate*1	Max. 30 frames/sec*2 (AC Power source Frequency is 60 Hz) Max. 25 frames/sec*2 (AC Power source Frequency is 50 Hz)		Transmission speed	Up to 54 Mbps	-
Aperture (F No.)	F2.8		Security	User ID / Password, SSL		Security	SSID, WEP (64/128/152 bit), WPA-PSK (TKIP), WPA2-PSK (AES)	-
Required light intensity	5 to 10,000 lx (3 to 10,000 lx in color night view mode)		Supported protocols	IP: IPv4, IPv6 Dual-Stack IPv4: TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, ARP, ICMP, POP3, NTP, UPnP, SMTP Authentication, RTP, RTPSP*3, RTCP, HTTPS, SSL, TLS IPv6: TCP, UDP, IP, HTTP, FTP, SMTP, DNS, ICMPv6, POP3, NDP, NTP, RTP, RTPSP*3, RTCP, HTTPS, SSL, TLS		General		
Scanning system	Progressive scan		User access limit	HTTP: Max. 30 simultaneous accesses (max. 10 accesses in MPEG-4 mode) HTTPS: Max. 10 simultaneous accesses (max. 5 accesses in MPEG-4 mode)		Operating temperature	+5°C to +40°C (+41°F to +104°F)	
Audio			Buffered images*4	Approx. 250 images (320 x 240) -Standard image quality -with time display		Operating humidity	20% to 80% (no condensation)	
Audio communication	One-way communication		Image transfer method	SMTP*5, FTP, HTTP		Dimensions (H x W x D)	85 x 85 x 35.5 mm (3 3/8 x 3 3/8 x 1 3/8 inch) 140 g (0.311 lb.)	85 x 85 x 27 mm (3 3/8 x 3 3/8 x 1 1/16 inch) 100 g (0.22 lb.)
Audio compression	ADPCM 32 kbps		Image buffer/transfer triggers	Alarm, Timer or Motion Detection		Weight (only the unit)		
Audio bandwidth	300 Hz - 3,400 Hz					Power supply	AC adaptor: input 100 - 240 V AC, 50/60 Hz Output 9V DC, 750 mA	
Audio input	Built-in microphone					Power supply via	N/A	Yes (proprietary PoE)
Audio output	N/A					Power Transfer Unit		
Terminal						Maximum Power Consumption	6.8 W (during wireless communication)	2.8 W
Network interface	Ethernet (10Base-T / 100Base-TX)							
External I/O connector	Input: 1 Output: 1 Input: 1							

*1 The frame rate may slow down depending on the network environment, PC performance, image quality, when viewing dark images, etc.

*2 Not applicable to 640 x 480 JPEG.

*3 Only still images in JPEG format can be displayed on a mobile phone.

*4 The maximum number of images that can be buffered depends on image resolution and image quality.

*5 For information about MPEG-4 image capacity, see the Panasonic Network Camera website at <http://panasonic.net/pcc/support/networkcam/support/info.html>.

*6 POP Before SMTP Authentication and SMTP Authentication (PLAIN, LOGIN, and CRAM-MD5) are supported.

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<http://panasonic.net/pcc/ipcam>

BL-C10121-LT(0901)
All pictures simulated.
Design and specifications are subject to change without notice.

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REFURGE
HCM 403A

Network Camera
Indoor Use Only **BB-HCM701**
Indoor Use Only **BB-HCM705**
*AC adaptor is sold separately

Viewnetcam.com UPnP PoE Ready
Access www.viewnetcam.com for registration information.

View Places That You Couldn't Even See Before

BB-HCM705

BB-HCM701 and BB-HCM705 are highly compact network cameras that are only about 60% of the size of existing model. Thanks to their compactness, these models are inconspicuous and blend in well with the installation surface. They can be mounted on walls as well as ceilings. A wall-mounted camera can offer a more natural view as compared to an overhead position because the viewing angle is closer to that from the human eye.

These cameras can help you to seize business opportunities with their capability to eliminate gaps in time and distance thereby contributing to "Zero Distance Management".

See There

When You Can't Be There



Waiting room



School



Entrances



Lobby

Zero Distance Management

Zero Distance Management is a new business style made possible by Panasonic network cameras. It allows safe, smooth, economical business management that is totally free from conventional distance and time limitations.

System Diagram



*An optional AC adaptor can also be used

Achieving Zero Distance Management with a Variety of Functions



Capture

Megapixel Cameras (*BB-HCM705 only)

Mega pixel and higher image quality

Resolution has been improved to 1280 x 960 pixels, enabling rendering of finer detail. VGA (Video Graphics Array) quality has also been improved.

Megapixel image quality comparison of new and existing models



Existing model

Displays crisper image!

2x2 Pixel Binning (*BB-HCM705 only)

2 x 2 pixel binning treats four adjacent pixels as one virtual pixel, thereby increasing camera sensitivity, and improving viewability in low light conditions.

4-pixel summation function



*This function cannot be used with 1280 x 960 display resolution.
*The ON/OFF setting of this function is fixed and cannot be switched over automatically.

Image quality comparison



BB-HCM705 [with 4-pixel summation function ON]

BB-HCM705 [standard model]

Capture

Sound and Shock Detection Function

When the camera reacts to a sound or shock, camera temporarily saves or transfers the image.



Control

EX Zoom (*BB-HCM705 only)

Although not equipped with optical zoom, these models have an EX Zoom [EX is supposed to stand for "excellence"] function. This allows high image quality during VGA (Video Graphic Array) display with the use of 1280 x 960 pixel image.



1280 x 960 pixel display

This allows high image quality during VGA (Video Graphic Array) display.



VGA (640 x 480 pixel) display

EX Zoom (x2)

Connect

Data transmission / H.264 adopted

The adoption of H.264/ACV has enabled reduction of data volume by more than 30% compared to MPEG-4 when transmitting data of the same image quality.

Comparison of data size



Installation

Highly compact

Models BB-HCM701/705 are about 60% of the size of existing model, BB-HCM527, and therefore much more compact. Thanks to their compactness, these models are inconspicuous and blend in well with the installation surface.



Ceiling Flush mount Bracket

These models can be flush-mounted on ceilings. Compact and ceiling-mountable, cameras blend in with the installation surface with minimum protrusion.



Ceiling flush-mount bracket

Part Names



*1 See 1.1 Understanding the Camera Indicator in the Troubleshooting Guide on the CD-ROM for indicator meaning.

Specifications [BB-HCM701 / BB-HCM705]

		BB-HCM705	BB-HCM701			BB-HCM705	BB-HCM701
Server				Camera			
Video Compression		JPEG (3 levels), MPEG-4, H.264		Zoom		3 x digital zoom	
Video Resolution		1280 x 960, 640 x 480, 320 x 240, 192 x 144**	640 x 480, 320 x 240, 192 x 144**	Viewing Angle		Horizontal: 69°, vertical: 51°	Horizontal: 67°, vertical: 50°
Image Quality (JPEG Only)		JPEG (favor clarity, standard, favor motion)		Pan/Tilt Angle		Pan: -10° to +10° (ceiling mount); -52° to +52° (wall mount); Tilt: -57° to 0° (ceiling mount); 57° to +57° (wall mount)	
Frame Rate*2		Max. 30 frames/second	640 x 480, 320 x 240, 192 x 144	Digital pan/tilt*3		BB-HCM705 only	
Security		User ID / Password, SSL		Number of Pixels		MOS sensor, 1.3 million pixels	CMOS sensor, 300,000 pixels
Supported Protocols		IPv4 / IPv6 Dual-Stack IPv4: TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, ARP, ICMP, POP3, NTP, UPnP, SMTP Authentication, RTP, RTSP, RTCP, HTTPS IPv6: TCP, UDP, IP, HTTP, FTP, SMTP, DNS, ICMPv6, POP3, NDP, NTP, RTP, RTSP, RTCP, HTTPS		Focus		Fixed 0.5 m-infinity	
User Access Limit		Max. 30 simultaneous accesses (max. 10 accesses with voice reception)		Aperture		F2.4	F2.0
Buffered Image*3		About 1160 frames (320 x 240, standard image quality) with time display (when SD memory card is not inserted)		White Balance		Auto/manual/hold	
Message-Digest Algorithm		HMAC-MD5, HMAC-SHA-1		Exposure		Auto	
Message Transfer Condition		Alarm, timer, Motion Detection, Sound or Shock		Illuminance		At 640 x 480: 0.3 to 100,000 lux In Color Night View mode: 0.06 to 100,000 lux At 1280 x 960: 0.6 to 100,000 lux In Color Night View mode: 0.07 to 100,000 lux Screen brightness, white balance: automatic/manual setting	1.5-100,000 lx 10.4-100,000 lx when in Color Night View model
Image Transfer Method		SMTP*, FTP, HTTP		Audio		Camera to PC	
				Audio Communication		Play with ActiveX	
				Audio Play Method		Play with ActiveX	
				Audio Compression		MPEG-2/3/4 AAC, AAC-LC, AAC-LC/HE AAC, MPEG-4/AMR, AAC/AC3	
				Audio Bandwidth		300 Hz - 3.4 kHz	
				Audio Input		Built-in microphone	
				Terminal			
				Interface		10Base-T/100Base-TX Ethernet RJ-45 connector x 1	
				External Input		External sensor input x 1	
				SD Memory Card Slot		Full size	
				General			
				Operating Temperature		Operation: 0°C to +40°C (32°F to +104°F) Storage: -10°C to +50°C (14°F to +122°F)	
				Operating humidity		Operation: 20% to 80% (No Condensation) Storage: 20% to 90% (No Condensation)	
				Dimension (H x W x D)		111mm x 111mm x 73mm (4.37 inches x 4.37 inches x 2.87 inches)	
				Weight		250g (0.55 lb.)	260g (0.53 lb.)
				Power supply		Operation AC adaptor (Model No. BB-HCA7A) input 100 - 120 V AC, 50/60 Hz Output 12V DC, 750 mA Operation AC adaptor (Model No. BB-HCA7E) input 100 - 240 V AC, 50/60 Hz Output 12V DC, 750 mA	
				PoE		PoE standard IEEE 802.3af-2003	
				Consumption		When Using an Optional AC adaptor (Model No. BB-HCA7A) About 3.2 W (Max. 3.8 W) When Using an Optional AC adaptor (Model No. BB-HCA7E) About 3.3 W (Max. 3.9 W)	When Using an Optional AC adaptor (Model No. BB-HCA7A) About 2.4 W (Max. 2.7 W) When Using an Optional AC adaptor (Model No. BB-HCA7E) About 2.5 W (Max. 2.9 W)

*1 except H.264

*2 Frame rate may slow down depending on the network environment, PC performance, image quality, SD memory recording, using IPsec or what object you view

*3 The maximum number of frames changes depending on the image quality and what object you buffer

*4 POP before SMTP authentication and SMTP authentication (PLAIN and LOGIN) are supported. SMTP authentication (CRAM-MD5) is not supported

*5 When [Max. Image Size] is set to [1280 x 960], zoom features are not available and digital pan/tilt features are also not available.

Panasonic

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Network Camera
 Indoor use **BB-HCM715**
 Outdoor use **BB-HCM735**
 *AC adaptor is sold separately.

Viewnetcam.com
 Access www.viewnetcam.com for registration information.

UPnP

PoE Ready

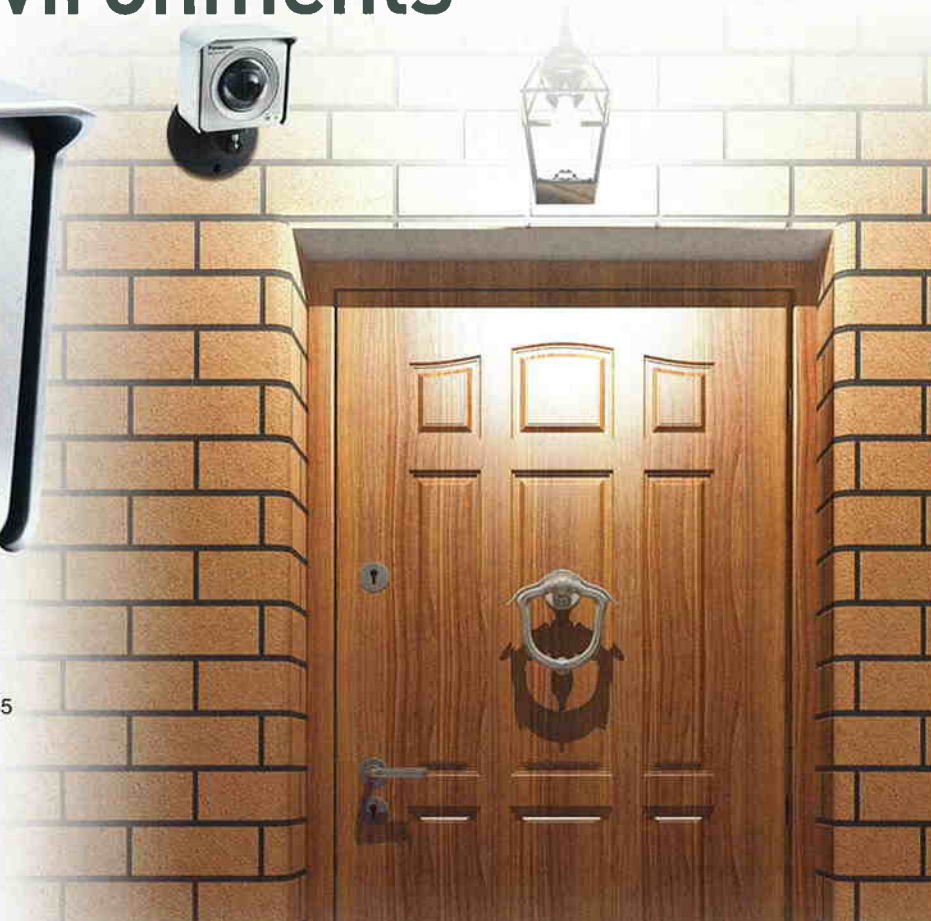
IPv6 Ready

*This logo mark is issued by the IPv6 Ready Logo Program Committee, an IPv6 promotion group established mainly by the IPv6 Forum.

See from Anywhere with a Variety of Monitoring Environments



BB-HCM735



See There

When You Can't Be There™



passageway



Garage



Stores



Entrances

System Diagram

The PoE function supplies power through an Ethernet cable*. DDNS service and UPnP compatibility make it easy for anybody to set up and use the system over the Internet.



Zero Distance Management

Zero Distance Management is a new business style made possible by Panasonic network cameras. It allows safe, smooth, economical business management that is totally free from conventional distance and time limitations.

*An optional AC adaptor can also be used.

Achieving Zero Distance Management with a Variety of Functions



Capture

Megapixel Cameras

Mega pixel and higher image quality
Resolution has been improved to 1280 x 960 pixels, enabling rendering of finer detail. VGA [Video Graphics Array] quality has also been improved.

Megapixel image quality comparison of new and existing models

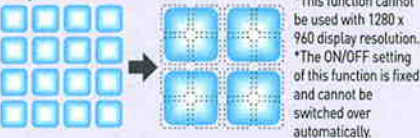


New model: BB-HCM735 (VGA)

Low Light Conditions (4-pixel summation function)

Low light 2 x 2 pixel Binning
2 x 2 pixel binning treats four adjacent pixels as one virtual pixel, thereby increasing camera sensitivity, and improving viewability in low light conditions

4-pixel summation function



*This function cannot be used with 1280 x 960 display resolution.
*The ON/OFF setting of this function is fixed and cannot be switched over automatically.

Image quality comparison



BB-HCM735 (with 4-pixel summation function ON) BB-HCM735 (standard mode)

Control

EX Zoom

Although not equipped with optical zoom, these models have an EX Zoom [EX is supposed to stand for "excellence"] function. This allows high image quality during VGA [Video Graphic Array] display with the use of 1280 x 960 pixel image.



1280 x 960 pixel display

This allows high image quality during VGA [Video Graphic Array] display.



VGA [640 x 480 pixel] display

Connect

Data transmission / H.264 adopted

The adoption of H.264/ACV has enabled reduction of data volume by more than 30% compared to MPEG-4 when transmitting data of the same image quality.

Comparison of data size



Installation

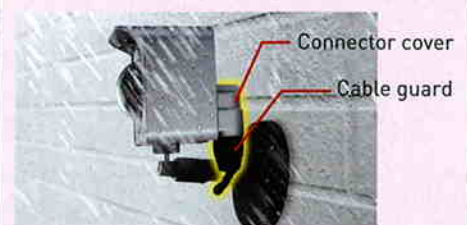
Enhanced waterproof performance

BB-HCM735 can be directly installed onto any outdoor walls. Wider choice of outdoor installation location (formerly limited to space under the eaves, etc.) expands its scope of application, catering better to users' needs.



* When the camera is installed according to the instructions provided in the included documentation, and the camera has been properly waterproofed.

Connector cover and cable guard provide protection against wind and rain to ensure uninterrupted signal transfer.



Part Names

Front View



Rear View



Specifications [BB-HCM715/BB-HCM735]

Server		Camera		General	
Image Compression	JPEG (3 levels), MPEG-4, H.264	Sensor Type	1/3 inch CCD sensor, approx. 1,300,000 pixels MAICOVICON	Operating Temperature	BB-HCM715: Operation: +0 °C (+32 °F) to +40 °C (+104 °F) Storage: +0 °C (+32 °F) to +50 °C (+122 °F) BB-HCM735: Operation: -20 °C (-4 °F) to +50 °C (+122 °F) Storage: -25 °C (-13 °F) to +60 °C (+140 °F)
Image Resolution	640 x 480, 320 x 240 [default], 192 x 144	Lens Focal Point	Fixed [focal range: 0.5 m to infinity]	Operating Humidity	BB-HCM715: Operation: 20% ~ 80% (no condensation) Storage: 20% ~ 90% (no condensation) BB-HCM735: Operation: 20% ~ 90% (no condensation) Storage: 20% ~ 90% (no condensation)
Image Quality	JPEG (favor clarity, standard, favor motion), MPEG4	Aperture [F No.]	F2.4	Dimension [H x W x D]	100 x 100 x 74 mm [3 15/16 inches x 3 15/16 inches x 2 15/16 inches]
Frame Rate**	Max. 30 frames/second (1280 x 960**); 640 x 480, 320 x 240, 192 x 144	White Balance	Auto/manual/hold	Weight [Only the Unit]	BB-HCM715: 335 g [0.74 lb.] BB-HCM735: 340 g [0.75 lb.]
Security	User ID/password/SSL	Exposure	Auto	Power Consumption	When Using an Optional AC Adaptor (Model No. BB-HCA7A) About 3.3 W (7.5 W during pan / tilt scan) When Using an Optional AC Adaptor (Model No. BB-HCA7E / BB-HCA7E) About 3.3 W (7.5 W during pan/tilt scan) When Using PDE About 3.3 W (7.5 W during pan/tilt scan)
Supported Protocols	IPv4 / IPv6 Dual Stack IPv4: TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, ARP, ICMP, POP3, NTP, UPnP*, SMTP Authentication, RTP, RTSP, RTCP IPv6: TCP, UDP, IP, HTTP, FTP, SMTP, DNS, ICMPv6, POP3, NTP, RTP, RTSP, RTCP	Illuminance	At 640 x 480: 0.1 to 100,000 lux (In Color Night View mode: 0.04 to 100,000 lux) At 1280 x 1024: 0.4 to 100,000 lux (In Color Night View mode: 0.07 to 100,000 lux) Screen brightness, white balance: automatic/manual setting	Power Supply	Optional AC adaptor (Model No. BB-HCA7A) Input 100-120 V AC, 50/60 Hz Output 12 V DC, 750 mA Optional AC adaptor (Model No. BB-HCA7E/BB-HCA7E) Input 100-240 V AC, 50/60 Hz Output 12 V DC, 750 mA PoE: PoE standard IEEE802.3af-2003
User Access Limit	Max. 30 simultaneous accesses (Max. 8 accesses while accessing HTTPS site in HTTPS communication; max 3 accesses in H.264/MPEG-4 mode)	Audio			
Buffered Image	About 1290 frames (320 x 240, standard image quality) with time display (when SD memory card is not inserted)	Audio Communication	2-Way half duplex		
Image Transfer Method	SMP**3, FTP, HTTP	Audio Play Method	Play with ActiveX		
Image Buffer/Transfer Triggers	Alarm, timer, motion detection	Audio Encoding Method	Encoding with ActiveX		
Camera		Audio Compression	H.264 / MPEG-2 AAC (AAC-LC) 64Kbps / MPEG-4 / JPEG-ADPCM 32 kbps		
Zoom	6x zoom [2x EX zoom, 3x digital zoom]	Audio Bandwidth	300 Hz ~ 3.4 kHz		
Viewing Angle	Horizontal: 69 [total 174°], vertical: 51° [total 105°] Pan: -52° up to +52°, Tilt: -45° up to +8°	Audio Input	Built-in microphone, external microphone input terminal		
Revolving Speed	Pan: max. 80°/sec, tilt: max. 80°/sec	Audio Output	Audio line output terminal for external speaker		
		Terminal			
		Network Interface	Ethernet (10Base-T / 100Base-TX / 1000Base-TX)		
		External I/O Connector	Input: 2, output: 1		
		Video Output**4	Analog composite (NTSC/PAL)		
		Video Output**4	3.5 mm stereo mini jack [output is mono]		
		External Microphone Input	3.5 mm mini jack		
		SD Memory Card Slot	Full size		

**1 Frame rate may decrease in the following situations: - When buffering images - When using color night view mode - When [Analog Video Output] is set to [Enable] - When many users are viewing camera images
**2 30 frames/second is not possible when viewing MJPEG images at 1280 x 960 resolution
**3 The camera supports PoE before SMTP Authentication and SMTP Authentication, PLAIN, LOGIN, and CRAM-MD5 SMTP Authentication are supported. SSL supports SMTP over SSL. STARTTLS is not supported
**4 Use only the included Audio/Video Cable when connecting an external microphone, speaker or TV.