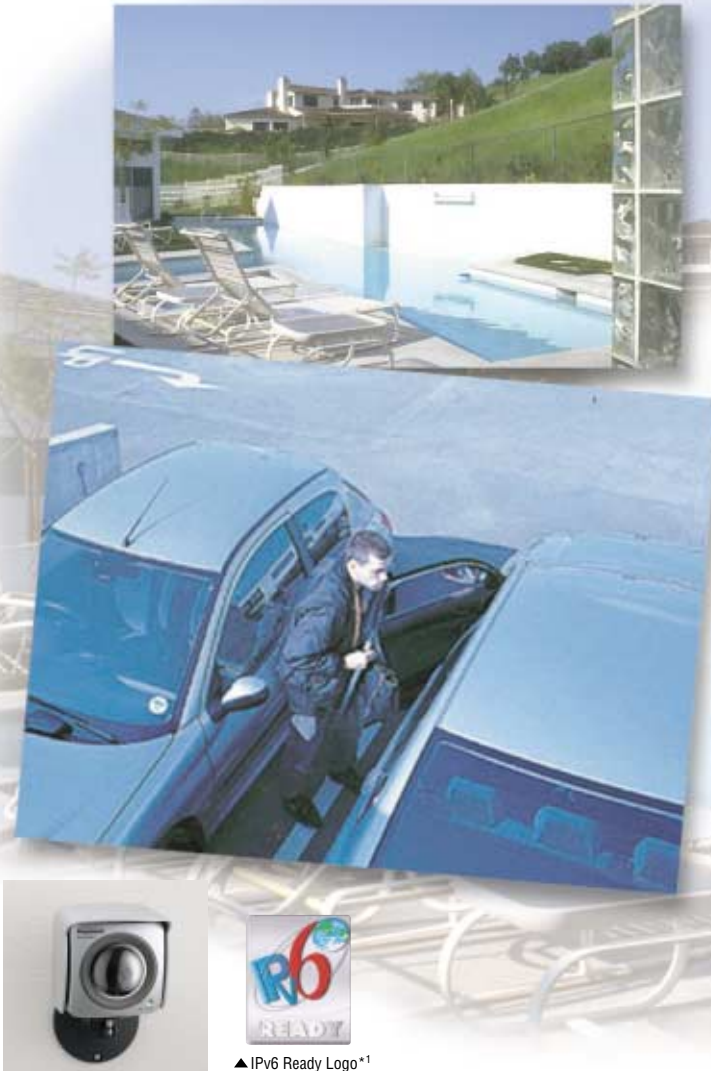
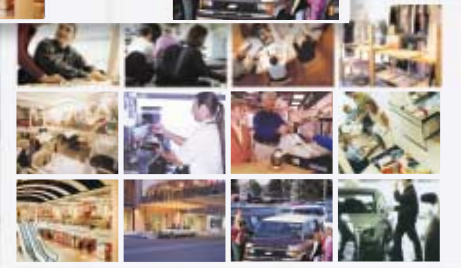


Panasonic

ideas for life

BB-HCM331

IPv4/v6 Audio 2-way Type
Outdoor Network Camera



▲ IPv6 Ready Logo*1

Splash Resistant body for indoor and outdoor use

Your Panasonic Network Camera has a splash resistant body. The splash resistant body allows the camera to be used indoors or outdoors.

Water protection level:

Compliant with JIS C 0920, protection level 4, splash-proof panel

Operating Temperature:

-20°C to 50°C

Two-Way Voice Communications

Use of the built-in microphone and a separately purchased amp-equipped speaker enables two-way voice communication (transceiver system)*2 between the network camera and a PC used to monitor the camera image. Voice transmission and reception can be switched easily from the PC used to monitor the image. For example, it allows people in a head office to provide instructions or messages to people on a sales floor while observing the image on their PC.

Enhanced Image Expression

CCD Sensor

The BB-HCM331 features a CCD for sharp image expression.

Image Refreshing Speed

The image refreshing speed (maximum) has been increased to 30 images/sec* for smoother displays of moving images.

*Image Resolution: 320 x 240 or 160 x 120.

Color Night View Mode

The Color Night View Mode brings the minimum light requirement from 3 lx down to 0.2 lx, letting you capture images even in dimly lit places.

Color night view



Ordinary camera view



Standard SD Memory Card Slot

Image recording function



Images captured by the network camera can be recorded directly onto an SD Memory Card (sold separately). *Voices cannot be recorded.

• Number of Recording Files per SD Memory Card (Image Quality: Standard)

SD Memory Card Model No.	Resolution		
	640 x 480	320 x 240	160 x 120
1GB (RP-SDH61GU1A)	Approx. 33KB/file 29,000 Images	Approx. 16KB/file 58,000 Images	Approx. 5KB/file 180,000 Images
512MB (RP-SDH512U1A)	Approx. 14,000 Images	Approx. 29,000 Images	Approx. 94,000 Images
256MB (RP-SDH256U1A)	Approx. 7,000 Images	Approx. 14,000 Images	Approx. 47,000 Images
128MB (RP-SDH128U1A)	Approx. 2,000 Images	Approx. 7,000 Images	Approx. 23,000 Images
64MB (RP-SD64BPPA)	Approx. 1,000 Images	Approx. 3,000 Images	Approx. 11,000 Images

*The operation of SD Memory Cards not listed above cannot be guaranteed.

Multi-Camera Setup Supported

Simultaneous monitoring of images using up to four network cameras. Images from up to four camera units can be assigned as a group, and the monitor display can be switched to any of three image groups. This enables simultaneous display of the images from up to 12 camera units, with no audio.

Alarm-Controlled and Timer-Controlled Image Transfer Functions

The Alarm-Controlled Image Transfer function uses a commercially available external Sensor or switch and sends the image only when there is an action such as turning on the light or opening the door. The Timer-Controlled Image Transfer function automatically transmits images according to the set time zone and the day of the week. These convenient functions eliminate your need to constantly check the image.

*When e-mail function is used to transfer images or messages, e-mail transmission may not be possible in some cases due to the mail server authentication system (SMTP authentication, etc.) used by your Internet service provider.

*The image transfer functions can be used only with a PC. With a cell phone, only the e-mail transmission function can be used.

Supporting Viewnetcam.com service

Viewnetcam.com service allows you to access the camera over the Internet with your favorite domain name (e.g. bob.viewnetcam.com) instead of a global IP address. For more information on Viewnetcam.com service, Please access www.viewnetcam.com for more information.



A Wide Range of Camera Control Functions

Click & Center

When the mouse button is clicked at a location on the image, the camera moves so that the image is shown with the selected location at the center.

Preset

This function lets you preset the camera direction. You can use it to view the image captured from the preset camera position with one-touch operation.

External Output Control

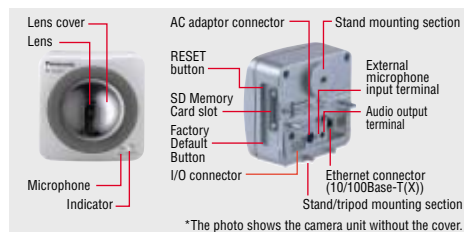
This provides ON/OFF operation of an externally connected device. For example, it can be used to turn on a light when the surrounding area becomes dark or to turn on a buzzer in case of an emergency.

Pan and Tilt Movement



Pan
(173° maximum)

Tilt
(105° maximum)



IPv6-Ready

Our new network cameras allow the use of a virtually unlimited number of IP addresses*³ by supporting IPv6, a next-generation protocol. The IPv4/IPv6 dual-stack feature enables you to use IPv4 at the present and switch over to IPv6 in the future.

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

*2 This function can be used with a PC only. It cannot be used with a cell phone. To hear the voice transmitted from the PC, a commercially available speaker with a built-in amp must be installed. The transceiver system does not allow simultaneous transmission and reception of voices. The BB-HCM331 may require a version upgrade to the IPv6 environment.

For the latest information, visit Panasonic's support Web site (<http://panasonic.co.jp/pcc/products/en/netwkcaml/>).

*3 An IP address is a unique number assigned to each user so that the user can be identified on the Internet.

*4 IPsec is an IP security protocol for data encryption standardized by IETF, an international community devoted to the standardization of Internet specifications.

IPsec*⁴ Supported

IPsec is a technology used to encrypt data packets in order to prevent eavesdropping by third parties. When combined with a conventional authentication function based on user names and passwords, IPsec offers enhanced security.

Specifications of BB-HCM331 Network Camera

Model No.	BB-HCM331
Product type	Outdoor type and voice function
Image data compression system	JPEG (Motion JPEG for moving image display)
Video Resolution	640 x 480, 320 x 240, 160 x 120
Image quality	3 modes (Favor Clarity, Standard, Favor Motion)
Frame rate* ¹	Max. 30 frames/sec (320 x 240, 160 x 120), Max. 12 frames/sec (640 x 480)* ²
Security	User ID, password, IPsec
Encryption algorithm	DES-CBC, 3DES-CBC, AES-CBC
IPsec function* ³	ESP encryption, EPS authentication, transport mode (main mode only)/tunnel mode IKE (Internet Key Exchange)
Supported protocol	IPv4/IPv6 dual stack IPv4: TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, ARP, ICMP, POP3, NTP, IPsec, UPnP IPv6: TCP, UDP, IP, HTTP, FTP, SMTP, DNS, ICMPv6, POP3, NDP, NTP, IPsec
User access limit	Max. 30 accesses (max. 10 accesses with voice reception)
Buffered images* ⁴	Approx. 125 images: (320 x 240), standard image quality (approx. 16 KB per image) (without using SD Memory Card)
Viewing Angle	53° horizontal (total 173°) 40° vertical (total 105°)
Pan	-60° up to +60°
Tilt	-45° up to +20°
Revolving speed	Pan: Max. 80°/sec, Tilt: Max. 80°/sec
Number of pixels	1/4 inch, approx. 320,000 pixels, CCD sensor
Lens focal point	Fixed (focal range: 0.5 m to ∞)
Lens brightness	F3.5
Required light intensity	3 to 100,000 lx (in Color Night View mode: 0.2 to 100,000 lx)
Voice direction	Half-duplex two-way communication (transceiver system)
Voice data compression system	ADPCM 32 kbps
Voice band	300 Hz ~ 3.4 kHz
Audio input	Built-in microphone or external microphone (sold separately), external microphone input terminal (3.5-mm dia. mini-jack)
Audio output* ⁵	Audio line output terminal for external speaker (3.5-mm dia. stereo mini-jack, monaural output)
Network	Ethernet (10Base-T/100Base-TX)
I/O connector for sensor	G GND 1 External Sensor Input G GND 2 External Sensor Input 3 External Device Control Output 4 DC Power Output Terminal (10.5~13.5 V DC)
SD Memory Card slot	Full size (operation guaranteed for 1GB, 512MB, 256MB, 128MB and 64MB SD Memory Cards)
Operating temperature	-20°C to 50°C
Operating humidity	20% to 90% (No condensation)
External dimensions (WxHxD)	Approx. 100 x 100 x 73 mm (Only the unit)
Weight	300 g (Only the unit)
Power Supply	AC adaptor: Input 120V AC, Output 12V DC
Consumption	6W

*1 This varies depending on the subject, image quality, network environment, PC performance, etc.

*2 The image update speed may decrease when favor-motion mode is set, when images are recorded onto an SD Memory Card, and when IPsec is used, as well as due to the network environment and PC performance.

*3 Transport mode (mode for IPsec communication between terminals, for IPv4 only) operating environment: Microsoft® Windows® XP Service Pack 1 or later only, tunnel mode (mode for IPsec between VPN routers, IPv4/IPv6)

*4 The number of images that can be stored varies depending on the subject. *5 Install an amp or use a speaker with a built-in amp.

Specifications for Compatible PC

	For IPv4	For IPv6
OS	Microsoft® Windows®XP, Windows®2000, Windows®Me, Windows®98SE	Microsoft® Windows®XP, Service Pack 1 or later
CPU	<ul style="list-style-type: none"> For monitoring of image from one camera unit: Pentium RIII (800 MHz or greater) For monitoring of images from multiple camera units: Pentium R4 (1.8 GHz or greater) 	
Protocol	TCP/IP (HTTP, TCP, UDP, IP, DNS, ARP, ICMP) protocol must be installed.	TCP/IP (HTTP, TCP, UDP, IP, DNS, ICMPv6, NDP) protocol must be installed.
Interface	10/100-Mbps LAN card must be installed.	
Web browser	Internet Explorer 6.0 or later	
Audio	Audio input/output function (microphone, speaker, etc.)	

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<http://panasonic.co.jp/pcc/products/en/netwkcaml/>