

System Requirements for your PC

OS	Microsoft® Windows Vista® Microsoft® Windows® XP Microsoft® Windows Server® 2003 Microsoft Windows 7 Microsoft® Windows Server® 2008
Web browse	Internet Explorer® 6/7/8(32bit)
Resolution	SXGA (1280 x 1024 pixels; 16,770,000 colors)
File system	NTFS (NT File System)
Audio*1	Audio output feature (Speaker or Headphones) Audio input feature (Microphone)

Hardware specification

Recording condition	· When 10 network camera units are connected CPU: Intel® Pentium® 4 3GHz or greater, or equivalent compatible processor, RAM: 1024 MB or more*2 · When 2 network camera units are connected CPU: Intel® Pentium® 4 2.6GHz or greater, or equivalent compatible processor, RAM: 512 MB or more*2
Voice	Audio output function (including speaker or headphone)

*1 When using a camera that supports audio

*2 This specification is required for using all network cameras to simultaneously record at a resolution of 320 x 240 in standard image quality, while monitoring with all registered cameras at a frame rate of 2 fps.

Still and motion image data size

BB Series

JPEG Data size for 1 image frame (image only), Data format: JPEG

resolution (dot)	favor clarity size(KB)	standard size(KB)	favor motion size(KB)
1280 x 960	approx.120	approx.77	approx.60
640 x 480	approx.50	approx.35	approx.27
320 x 240	approx.25	approx.16	approx.10
194 x 144	approx.10	approx.7	approx.5

WV Series (i-PRO SmartHD)

JPEG Data size for 1 second of motion images(images only), Data format: JPEG

resolution (dot)	Low size(KB)	Normal size(KB)	Fine size(KB)	Super Fine size(KB)
1280 x 960	58	154	307	346
640 x 480	26	52	103	138
320 x 240	10	29	48	53

* JPEG Data Size

The approximate recording capacity is calculated by using the following formula:
Size (KB) x Frame rate (images/sec) x Recording time (sec)

Example

- The calculation for a 1-hour recording of 640 x 480 resolution images at a frame rate of 5 images/sec in Favor Clarity mode is as follows:
50 KB x 5 images/sec x 3,600 sec (1 hour) = 900,000 KB ≈ 879 MB
- In case of images with voices, 4 KB is added per each second:
900,000 KB + 4 KB x 3,600 sec = 914,400 KB ≈ 893 MB

* A version upgrade from BB-HNP11 and BB-HNP15 is not supported.

* Camera control depends on the control specifications supported by the network camera.

* The number of camera units allowed for simultaneous recording varies depending on the PC performance.

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<http://panasonic.net/pcc/products/netwcam/>

BB-HNP17 The recommended PC specification for number of recording camera*1.

CPU	Intel Core 2 quad Q9650		
Clock	3.00 GHz		
Memory	4 GB		
OS	Windows 7		
Audio	No		
Compression Format	H.264		
Frame rate	30fps		
Resolution	640 x 480	1280 x 960	
Number of camerast	20	Both recording and live monitoring works well as specified. No frame rate change happens.	This case hasn't been tested.
	2	This case hasn't been tested.	Both recording and live monitoring works well as specified. No frame rate change happens.
	1	This case hasn't been tested.	Both recording and live monitoring works. Frame rate control (reduced) happens for live monitoring, but there is no influence for the recording at all.

*1 The data shows the result based on an example case that only BB-HNP17 is running on the PC as an application. It is strongly recommended not to run other software while running this software for the best result.

MPEG-4/H.264 Data size for 1 second of motion images(images only)

MPEG-4/H.264 bitrate(kbps)	Data size/hour(MB)
2,048	900
1,536	675
1,024	450
768	338
512	225
384	169
256	113
192	84

MPEG-4 Data size for 1 second of motion images(images only), Data format: MPEG-4

resolution (dot)	MPEG-4 bitrate(kbps)	Data size/hour(MB)
640 x 480	2,048	900
320 x 240	1,024	450

H.264 Data size for 1 second of motion images(images only), Data format: H.264

resolution (dot)	fps	H.264 bitrate(kbps)	Data size/hour(MB)
1280 x 960	30	2,048	900
	15	1,536	675
640 x 480	30	1,024	450
	15	768	338
320 x 240	30	512	225
	15	384	169

* MPEG-4 bit rate: This depends on the value set at the camera for MPEG-4 bit rate for image distribution.

The approximate recording capacity is calculated by using the following formula:
MPEG-4 bit rate (Kbps)/8 bits x time (sec).

Example

- The calculation for 640 x 480 resolution images at an MPEG-4 bit rate of 768 Kbps is as follows:
768 Kbps/8 bits x 3,600 seconds (1 hour) = 345,600 KB ≈ 337.5 MB
- In case of images with voices, 4 KB is added per each second:
345,600 KB + 4 KB x 3,600 sec = 360,000 KB ≈ 352M

* H.264 bit rate: This depends on the value set at the camera for H.264 bit rate for image distribution.

The approximate recording capacity is calculated by using the following formula:
H.264 bit rate (Kbps)/8 bits x time (sec).

Example

- The calculation for 640 x 480 resolution images at an H.264 bit rate of 1536 Kbps is as follows:
1536 Kbps/8 bits x 3,600 seconds (1 hour) = 691,200 KB ≈ 675 MB
- In case of images with voices, 8 KB is added per each second:
691,200 KB + 8 KB x 3,600 sec = 720,000 KB ≈ 704MB

BB-HNP17-2

All pictures simulated.
Design and specifications are subject to change without notice.

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ideas for life

Network Camera Recorder with Viewer Software
BB-HNP17



ZERO DISTANCE MANAGEMENT

Live and recordable image and sound features for improved security and marketing research

Features

- H.264, MPEG-4 and Motion JPEG Recording & Monitoring
- Supports resolutions of 1280 x960
- Flexible Layout
 - Full Screen Display
 - Single Monitoring Screen Display
 - Multi-Monitoring window
 - Auto Scan Display under Multi-Monitoring
- Remote Access Function
- Time Specified Color Night View

- Multi-Sensor-Activated Recording
 - Motion Detection Recording
 - Built-in Sensor Detection Recording
 - Sound Detection Recording
 - Shock Detection Recording
 - Alarm Recording
- Pop-up display with Event Detection
- Timer Recording
- Timer Recording with Preset Position

- Converting Recorded Images to JPG/WAV/ASF/AVI formats
- Audio Transmission
- Snap Shot

System Diagram



See There
When You Can't Be There

Feel Safer with Panasonic

Clear image and innovative sound recording functions provide excellent monitoring for your business

Support for H.264, MPEG-4 and Motion JPEG Images and Sound

Images with sound from a LAN- or internet-connected network camera or network camera server can easily be recorded and replayed from a remote PC. Images together with sound can be recorded, which gives a sense of actually being on site, something that cannot be conveyed with images alone. It is also possible to record images from multiple network cameras simultaneously. In addition to MPEG-4 and Motion JPEG, H.264 for high compression and smooth movement is also supported, and mode can be selected according to application and environment.



* Corresponding Model Types

- BB / BL Series**
[H.264] BB-HCM735/HCM715/HCM705/HCM701/BL-C230/C210
[MPEG-4] BB-HCM735/HCM715/HCM705/HCM701/HCM581/HCM580/HCM547/HCM531/HCM527/HCM511/BL-C230/C210/C160/C140/C131/C111/C121/C101
[JPEG] BB-HCM735/HCM715/HCM705/HCM701/HCM581/HCM580/HCM547/HCM531/HCM527/HCM511/HCM371A/HCM110A/BL-C230/C210/C160/C140/C131/C111/C121/C101/C1
- I-PROI(WV) Series***
[H.264] WV-SC385/SP105/SP102/SP306/SP305/SP302/SF336/SF335/SF332/NP502(Ver.1.02 or later)/NW502S(Ver.1.02 or later)
[MPEG-4] WV-SC385/SP306/SP305/SP302/SF336/SF335/SF332/NP502(Ver.1.02 or later)/NW502S(Ver.1.02 or later)
[JPEG] WV-SC385/SP105/SP102/SP306/SP305/SP302/SF336/SF335/SF332/NP502(Ver.1.02 or later)/NW502S(Ver.1.02 or later)

- * WV series network cameras connected over the Internet can only display JPEG images.
 WV series network cameras connected to the network camera recorder software on the same network(LAN) can display MPEG-4 and H.264 images.
 * The WV series network cameras cannot record audio for MPEG-4 and H.264 images. When [MPEG-4] or [H.264] is selected in [Data Format], [Audio and Image] is displayed as inoperable.
 * When WV series cameras are registered to this software and used, some of the procedures and specifications for using the WV series network cameras will differ to those listed in this spec sheet.
 Please refer to the following site: <http://panasonic.net/pcc/products/netwcam/lineup/bb-hnp17/>

Support for 1280 x 960 Resolution Recording and Monitoring

Recording and monitoring of high resolution 1280 x 960 camera images is possible. In operating situations where detailed images are necessary, high quality images can be stored in a PC with the same high resolution.

Time-specified Color Night View

Color Night View can be set using a timer. Cameras are switched between normal and Color Night View modes from HNP17. By switching between normal mode for bright daylight conditions, and Color Night View for nighttime when there is darkness, camera images can be recorded or monitored using the most appropriate mode for a given time period. By saving normal mode shutter speed, after a return from Color Night View mode to normal mode, shutter speed can be returned to its original value.



Flexible Layout Setup Possible with Multi-monitoring Screen

It is possible to monitor from up to 16 cameras simultaneously on one screen. In case more than 16 cameras are registered, images from up to 64 cameras can be displayed on up to 128 pages with switching between screens. Switching can be done to provide full-screen display of camera images, and switching to single-screen view can be done by double-clicking on the camera image you wish to view.

Full Screen Display

A camera image is displayed on the full screen of your PC.

Single Monitoring Screen Display

If you double-click an image from the network camera, the screen display on your PC is switched into Single Monitoring / Multi-Monitoring screen for the user's convenience.

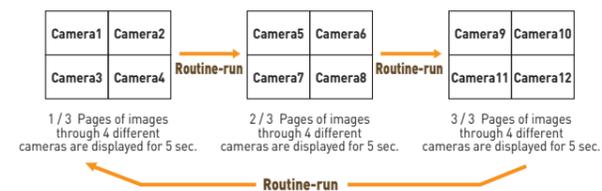


Flexible Layout

The multi-monitoring screen layout can be changed flexibly. For example it is possible to change the number of images displayed vertically and horizontally and increase the size of an image that you wish to give special attention to.

Auto Scan Display under Multi-Monitoring

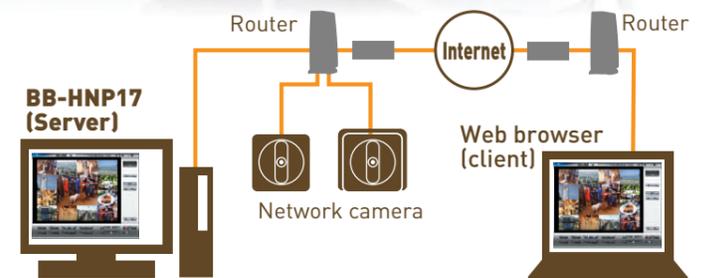
This function shows different multi-monitoring images at certain intervals and can switch into different pages of those images.



Remote Access Function

For host-side PCs installed with BB-HNP17, access is possible using a web browser for monitoring and checking of recorded data. It is not necessary for BB-HNP17 to be installed in the client-side PC. Three levels of access authority can be set for users, and administrator authority configurations can be set, including the addition of new image recording conditions.

- * The first time the server is accessed via a client PC web browser, the remote client recording program is automatically downloaded and installed.
 * When used with H.264, the accessing client-side PC must also have an H.264 user license (BB-HCAB).
 * When used with MPEG-4, the accessing client-side PC must also have an MPEG-4 user license (BB-HCAS).
 * Internet Explorer (Windows version) is the only web browser supported.
 * When BB-HNP17 (server) is accessed through the Internet using a web browser, a setting is necessary to permit access by an outside computer installed with HNP17.



Multi-sensor-activated Recording/Timer Recording with Preset Position

Detection by sensors mounted on network cameras can be used to activate recording. There is also a built-in timer recording function to start and end recording at preset times. By combining these functions, it is possible for sensor-activated recording to operate only within preset time periods. For each camera, 10 timer settings are possible. So for example, operation can start and end at times set differently for weekdays and weekends. The angle of a camera lens can be changed to a preset position, according to recording start time.*

* BB-HCM735/HCM715/HCM705 only

Motion Detection Recording

Recording starts when any movement in the image of the entrance or other place is sensed.



Built-in Sensor Detection Recording * BL-C230/C210/C160/C131/C111 only

Recording starts the moment the system detects temperature difference within its range that are emitted naturally by people animals etc.



Alarm Recording

Recording starts when any movement of the door or other items is sensed.



*Only Alarm 1 is available in case of BB-HCM705/HCM701

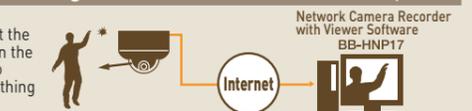
Timer Recording

Recording the inside of your shop or other places at intervals



Shock Detection Recording * BB-HCM735/HCM715/HCM705/HCM701 only

Recording starts the moment the system detects any shocks on the camera; someone is trying to damage the camera or something hits the camera, etc.



Sound Detection Recording * BB-HCM735/HCM715/HCM705/HCM701 only

Recording starts the moment a big sound happens in the place; the sound of collapse of things in a warehouse, etc.



Pop-up Display with Event Detection

This system is designed to enlarge the image (stationary image) at the time of the sensor detection by popping it out on the screen for notifying purpose.



Specifications

Camera registration monitoring	
No. of registrable camera units	Up to 64 camera units. Note that the actual number of registrable camera units varies depending on the performance of the PC used.
Camera image view	Sequential display, Up to 16 multi-camera display, full screen display, layout change
Image display size	Automatically adjusted to match the camera layout.
Camera setup*	Each camera can be set up individually (camera name, resolution, image quality setting, recording format, timer setting, etc.)
Selected camera image display	Automatically adjusted to match the camera layout.
Image zoom in/out*	3 types of zoom functions: the camera zoom functions [Optical zoom, Ex zoom, and digital zoom], as well as the network camera recorder software's digital zoom.
Preset	Preset functions set in cameras can be used
Camera control*	Control of basic camera functions (pan/tilt/zoom, brightness, resolution, image quality, sound level)
Preset Sequence*	Periodically scans and displays the locations registered in the camera presets. (Only for cameras with preset sequence feature)
Time specified color night view*	Color night view activation/deactivation can be registered in a schedule

Recording	
Recording file format	Original file format: Images and voices are recorded continuously in a moving image file.
Recording media	Hard disk, network drive*2
Recording resolution*1	H.264: 1920x1080/ 1280x960/ 1280x720/ 800x600/ 640x480/ 640x360/ 320x240/ 320x180 MPEG-4: 1280x960/ 640x480/ 320x240/192x144 M-JPEG: 2048x1536/ 1920x1080/ 1280x1024/1280x960/ 1280x720/ 800x600/ 640x480/ 640x360/ 320x240/ 320x180/ 192x144/ 160x120
Image quality (JPEG only)	BB Series: Favor clarity, Standard, Favor motions WV Series: Super Fine - Low (10 Levels)
No. of camera units for simultaneous recording	Dependent on camera type and performance of PC. See the hardware specifications "System Requirements for your PC".
Recording capacity limit function	Maximum recording capacity value can be set for individual camera units (Whether to save new data by overwriting or to stop recording when the set capacity is reached can be selected). In addition to a capacity limit for each camera, there is also a capacity limit for the entire storage media.
Motion detection recording (JPEG only)	The unit can be set to activate recording when motion is detected (sensitivity and threshold value can be adjusted) or to record for a certain time length before and after motion detection.*3 Motion detection can be disabled in specified areas. Motion detection can be confirmed on-screen.
Shock detection recording*1 (JPEG only)	Starts recording with shock detection recording when the camera detects a shock. The recording time for shock detection recording (and so on) is set using this software.

Built-in Sensor Detection Recording*1 (JPEG only)	When the signal of a sensor that is attached to the camera is detected, sensor recording starts.
Sound detection recording*1 (JPEG only)	The unit can be set to activate recording when sound is detected (Loudness and threshold value can be adjusted) or to record for a certain time length before and after motion detection. Sound detection can be confirmed on-screen.
Timer recording	Scheduled start and stop timer based on day of week and time. Key word can also be set for recording. (10 schedules can be registered per camera).
Timer recording with preset position	Specifying the display location of timer start/stop times
Alarm recording (JPEG only)	Recording is triggered by the reaction of a sensor mounted to the camera. A certain time length before and after the sensor reaction can also be recorded.
Disk capacity limit function	Monitors the free space on the specified recording disk, and stops recording when the free space becomes smaller than the set value.

- *1 Depends on Camera's Spec.
 *2-1 Folders on the network allotted to the drive can be specified for saving data.
 *2-2 When a network drive is specified as a folder for saving data, the amount of data flowing over the network increases.
 This may remarkably degrade the operating performance for watching or recording camera images, watching previously recorded images, etc., and may also result in errors. It is recommended that a folder on a local disk be specified for saving data.

Image search	
Recorded image search function	Search recorded images in 1-day units using the recording time, or using a key word set before recording. Searching can also be done for particular, desired folders.
Image operation	
Continuous play back	Playback of images with voices, playback of image files. Playback speed can be varied. Playback in reverse is possible. Simultaneous playback of images from multiple cameras is also possible.
Recorded image view	A list of recorded image files, or a graphical list can also be displayed.
Operation of recorded images	Recorded images can be copied or deleted.
Format conversion	All or part of the recorded images can be converted to MPEG-1, MPEG-4, or JPEG format files, or only the audio portion can be converted to WAV files.
Language	
BB-HNP17A [For USA]: English / Japanese BB-HNP17CE [For Other Regions]: English / Germany / Spanish / Italian	

*3 The detection level varies depending on the camera resolution, image quality setting, subject conditions, network conditions, etc.