System Requirements for your PC

OS	Microsoft® Windows Vista® Microsoft® Windows® XP Microsoft® Windows Server® 2003 Microsoft Windows 7(32bit) 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.

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

Recommended PC specification *1	CPU	Core2 Quad CPU Q 9400	Intel Core 2Duo				
	Clock	2.66GHz	2.1 GHz				
	Memory	1.96GB	1 GB				
	OS	Windows XP	Windows XP or later				
Condition	Compression	H.264	JPEG		MPEG-4		H.264
	Monitoring frame rate	Not specify *2	10fps	Not specify *2	10fps	10fps	
	Resolution:	VGA	VGA		VGA	QVGA	VGA
	Monitoring layout	4 x 4	4 x 4	2 x 2	3 x 3	4 x 4	2 x 2
The Number of connecting cameras		20	10	4	8	11	2

*1 In case of using lower performanced PC than this table, PC resource is almost occupied by BB-HNP17. It cause that unexpected PC operation response degradation may occur. It is not recommended to install nor operate the other application during operating this software.

*2 In case of defining "Monitoring frame rate" to be "Not specify", PC resource is consumed much more than "10 fps". It case that the number of recordable camera will be reduced. BB-HNP17 display image with same frame rate from camera. (Ex. If camera output 30fps display around 30fps.)

Still and motion image data size

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

resolution (dot)	size(KB): favor clarity	size(KB): standard	size(KB): favor motion
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

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

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

resolution (dot)	MPEG-4 bit rate*
1280 x 960	2048kbps
640 x 480	1536kbps
320 x 240	1024kbps

* 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, 4 KB is added per each second:
  691,200 KB + 4 KB x 3,600 sec = 705,600 KB ≒ 689MB

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

resolution (dot)	MPEG-4 bit rate*
640 x 480	768kbps
320 x 240	384kbps
194 x 144	128kbps

* 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

* 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.

Panasonic
ideas for life

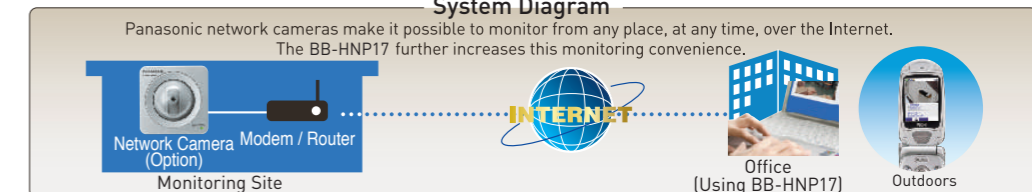# ZERO DISTANCE MANAGEMENT
Live and recordable image and sound features for improved security and marketing research

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
  Sound Detection Recording
  Shock Detection Recording
  Alarm Recording
• **Pop-up display with Sensor Detection**
• **Timer Recording**
• **Timer Recording with Preset Position**

• **Converting Recorded Images to PG/WAV/ASF/AVI formats**
• **Audio Transmission**
• **Snap Shot**

See There
When You Can't Be There

System Diagram
Panasonic network cameras make it possible to monitor from any place, at any time, over the Internet. The BB-HNP17 further increases this monitoring convenience.

Network Camera (Option)
Modem / Router
INTERNET
Office (Using BB-HNP17)
Outdoors
Monitoring Site

Panasonic

http://panasonic.net/pcc/products/netwkcam/

1006-HNP17-LT

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

Feel Safer with Panasonic
Clear image and innovative sound recording functions provide excellent monitoring for your business

H.264, MPEG-4 and Motion JPEG Recording & Monitoring

Even if a user of this system uses his/her PC at any place distant from a site to be recorded, this system enables the user to record and replay, on his/her PC, any image with sound which can be taken through its network camera connected with LAN or the Internet.

Under this system, the user can record any image as well as sound with it, and so the user can feel as if he/she was on the spot, even though he/she is actually away from the site. Also, this system enables the user to record several pieces of images through its network cameras at the same time.

Corresponding to the existing convenient functions of MPEG-4 and Motion JPEG, this system has also newly corresponded to the H.264 function which is responsible for high-compression and smooth moving image. So, users of this system can select a proper recording mode among multiple choices according to recording uses and environments.
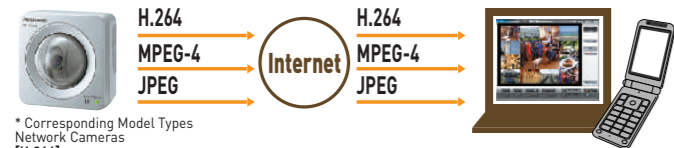
* Corresponding Model Types
Network Cameras
[H.264]
BB-HCM735 /HCM715 /HCM705 /HCM701
BL-C230 /C210
[MPEG-4]
BB-HCM735 /HCM715 /HCM705 /HCM701 /HCM581
/HCM580 /HCM547 /HCM531 /HCM527 /HCM515 /HCM511
BL-C230 /C210 /C160 /C140 /C131 /C111 /C121/C101

[Motion JPEG]
BB-HCM735 /HCM715 /HCM705 /HCM701 /HCM581 /HCM580
/HCM547 /HCM531 /HCM527 /HCM515 /HCM511/
BB-HCM403 /HCM371A /KX-HCM110A
BL-C230 /C210 /C160 /C140 /C131 /C111 /C121 /C101 /C1

Supports Resolution of 1280 x 960

This system enables a user to record and monitor, innovatively clearly in such high resolution as 1280 x 960 pixels, any image taken through its camera.
If you need to take a clear and detailed image for your convenient use by this system, you can save in your PC your recorded data as high image quality as it is for your convenience.

Time Specified Color Night View

This function is for setting the timer to turn ON/OFF the Color Night View Mode. This function automatically turns on Normal Mode in daytime and turns on Color Night View Mode in the night or a dark situation, and so this function enables recording / monitoring images taken by the Network camera(s) in a proper mode according the recording situation. This function also memorizes the shutter speed of the normal mode and so recovers the shutter speed of Color Night View Mode into the one of Normal Mode when switching from Color Night View Mode into Normal Mode.

Timer Setting automatically switches image modes.

Color Night View Mode OFF | Color Night View Mode ON | In case of Normal Mode in the night
6:00 | 18:00 | 6:00

Flexible Layout

This system enables a user to display images from up to 16 network cameras on one screen for simultaneous monitoring (Multi-Monitoring). In case that the number of network cameras registered in [BB-HNP17] exceeds 16 units, this system can show images from up to 64 network cameras on 128 pages of screens and switch these screens flexibly according to the user's need. Under this system, for example, a user can switch images from its cameras into a Full Screen Display or switch into a single screen display (Single Monitoring Screen Display) by double-clicking a image the user want to check closely, etc.

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.
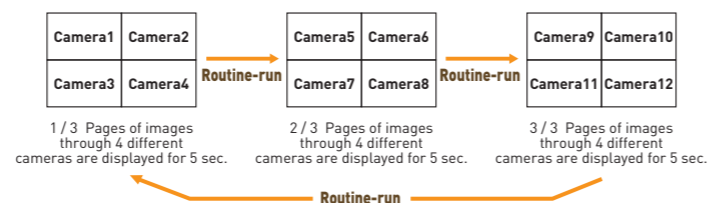
Flexibility of Layout Setup

Under this function, you can set up the layout of multi image screen display. For example, you can enlarge an image you want to check closely, you can change the number of images vertically and horizontally for your convenience, etc

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.

| Camera1 | Camera2 | | Camera5 | Camera6 | | Camera9 | Camera10 |
| Camera3 | Camera4 | Routine-run | Camera7 | Camera8 | Routine-run | Camera11 | Camera12 |

1 / 3 Pages of images through 4 different cameras are displayed for 5 sec. | 2 / 3 Pages of images through 4 different cameras are displayed for 5 sec. | 3 / 3 Pages of images through 4 different cameras are displayed for 5 sec.

Routine-run

Remote Access Function

If a user gets [BB-HNP17] installed on his / her PC, the user can access and / or check any image taken by the network camera on the web browser of his / her PC through the Network. In this use, [BB-HNP17] doesn't need to be installed on the PC on the client's side. Users making access to the image can establish three stages of access rights. The administrator has the right to create new use environmental settings by, for example, adding new recording conditions, etc.

Cautions: Before you install the remote client of [BB-HNP17], please be sure to buy the following license fro use.

For USA: BB-HCA5A and BB-HCA8A
For Other Regions: BB-HCA5CE and BB-HCA8CE

Router | Internet | Router
BB-HNP17 (Server)
Web browser (Client)
Network camera
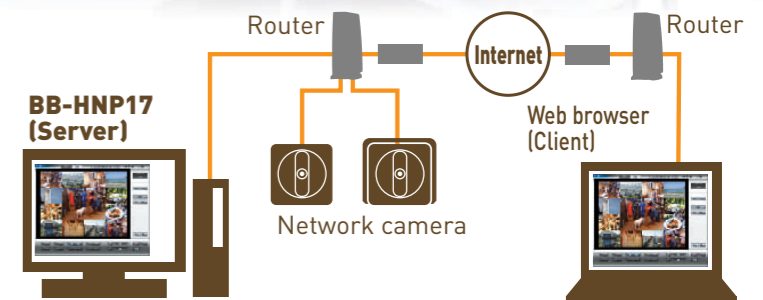
Multi-Sensor-Activated Recording/ Timer Recording with Preset Position

Under this function, different types of sensors (Movement Detector, Shock Detector, Sound Detector, External Sensor Detection) are designed to start recording. Also this system has its timer recording function which starts and ends the recording at user's specified time. Besides, in case of Timer Recording, the direction of the monitoring lens is designed to set at the specified target when the recording starts. Any combination of recording functions is available. For example, Sensor Detection Function combined with Timer Recording Function is possible. Recording to be started by Movement Detector within the specified time frame and Alarm Recording are also possible. Also, Recording Time before and after the sensor detection can be specified for setting. Timer Recording Function is designed to set 10 times of recording per camera. This enables a user to change recording-start /-end times between weekdays and weekend for his/her convenience.

Motion Detection Recording

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

Internet | Network Camera Recorder with Viewer Software BB-HNP17

Alarm Recording

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

Door sensor [Alarm 1] | Door sensor [Alarm 1]
Internet | Network Camera Recorder with Viewer Software BB-HNP17

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

Timer Recording

Recording the inside of your shop or other places at intervals

Internet | Network Camera Recorder with Viewer Software BB-HNP17

Shock Detection Recording

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.

Internet | Network Camera Recorder with Viewer Software BB-HNP17

Sound Detection Recording

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

Internet | Network Camera Recorder with Viewer Software BB-HNP17

Pop-up Display with Sensor 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.
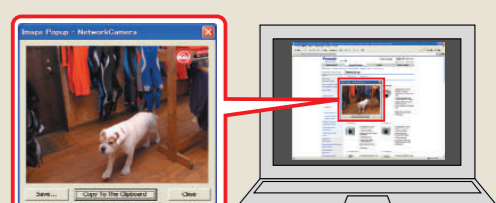
Specifications

Camera registration monitoring

No. of registerable camera units	Up to 64 camera units. Note that the actual number of registerable 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*1	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*1	3 types of zoom functions: the camera zoom functions (Ex zoom and digital zoom), as well as the ActiveX control of the computer.
Preset	Preset functions set in cameras can be used
Camera control*1	Control of basic camera functions (pan/tilt/zoom, brightness, resolution, image quality, sound level)
Preset Sequence*1	Periodically scans and displays the locations registered in the camera presets. (Only for cameras with preset sequence feature)
Time specified color night view*1	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 : 1280 x 960 / 640 x 480 / 320 x 240
MPEG-4 : 1280 x 960 / 640 x 480 / 320 x 240 / 192 x 144
MotionJPEG : 1280 x 1024 / 1280 x 960 / 640 x 480 / 320 x 240 / 192 x 144 / 160 x 120
Image quality (JPEG only)	Favor clarity , Standard , Favor motions
Recording interval	Not specified (based on camera's image update interval), specified: 5 images/second to 1 image/hour Recording interval designation and sound recording can be done simultaneously.
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.

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.

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

*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.

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