

**Panasonic**  
Closed Circuit Video Equipment

Network Colour Camera  
**WV-NM100**



A single camera can start your  
networking experience.



**NETWORK  
CAMERA**

# The WV-NM100 plays an active part in a broad range of applications.



## Home Security

View visitors approaching your home, and monitor the safety of children from almost anywhere.



## Office Security

Observe entry points in office buildings, lobbies, and branch offices while remaining at your desk.

## Field Management

Monitor manufacturing lines in the factory or storage facilities in the field.



## Transmission of Information

Transmit images of store campaigns or special events.



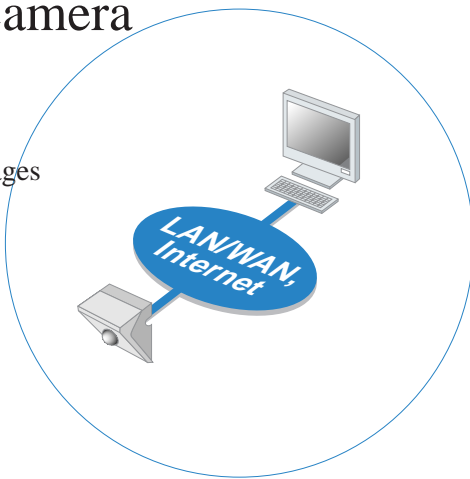
## Services

Monitor congestion in theme parks, libraries, hospitals and airport facilities.

\*The above all pictures are simulated for the purpose of this explanation, actual images may differ.

## At last, a high quality network colour security camera that is ready for both JPEG & MPEG-4.

Panasonic introduces the new WV-NM100 camera. This new camera captures live images and displays them onto your personal computer. A digital video camera, a web server, and a network interface are integrated into one compact housing. The camera can be connected directly to an Ethernet terminal, enabling effortless network monitoring. Simply setup an IP address.



### Easy Monitoring with a Web Browser

The WV-NM100 can handle images in JPEG format, the global standard for still image compression. Start monitoring by simply entering the IP address of the camera into the web browser.

### Handles MPEG-4\*, offering smoother images

In addition to JPEG, the WV-NM100 can use MPEG-4. MPEG-4 is the latest movie image compression format. View subjects with natural, smooth movements. Image sizes, quality and data distribution volume can be selected according to the network environment and communication speed.

(\*For monitoring in MPEG-4 format, the supplied plug-in software should be installed.)

### Works in low-light conditions

Thanks to the employment of imaging elements, coupled with the latest semiconductor technologies and low-light imaging technologies from surveillance cameras, the WV-NM100 demonstrates excellent low-light performance of 2 lx at electronic sensitivity 10x up. Images are clear even in low-light situations.

### Controlling the Camera's Direction

Change the view in both the horizontal and vertical directions from a personal computer. With a wide field of view, covering 140 degrees for panning and 120 degrees for tilting, the WV-NM100 captures exactly what you need to see.

## Software menu increases usability and effortless monitoring.

### Easy to Use Graphical User Interface

**Camera Setting Menu**

Camera name: Entrance camera

2002/01/01 / 00:00

**One click monitoring**  
 <One Time Pan Function>  
 One click of a button horizontally pans the camera back and forth within a range of 140 degrees.

**Automatic patrolling of up to 8 locations**  
 <Preset Scan Function>  
 Just a single click brings up cameras in a preset sequence.

**One click to view the desired camera location**  
 <Preset Function>  
 One click brings up any camera set in up to 8 locations.

**Selecting the optimum image**  
 <Image Size>  
 JPEG: 3 sizes in VGA (640 x 480), QVGA (320 x 240) and QQVGA (160 x 120)  
 MPEG-4: 2 sizes in CIF (352 x 288) and QCIF (176 x 144)  
 <Selection of Image Quality>  
 JPEG: 4 options of Super Fine, Fine, Normal and Rough  
 MPEG-4: 3 options of Fine, Normal and Rough

**Maneuvering the camera directions at will**  
 <PAN/TILT Function>  
 Direct the camera up, down, right and left by maneuvering the icon on the screen with a mouse.

**Get in close**  
 <Zoom Function>  
 Just a single click will change the magnification of the display screen from x1.0, x1.5 or x2.0.

### Monitor up to 8 cameras.

4 images in tiled windows x 2 image panes

Manual Selection

Group A

Group B

### Enhanced Security Due to Restricted Access

Restrict camera access by host authentication using the IP address of your personal computer, as well as authentication utilizing user name and password. Three access levels are available. In addition, the WV-NM100 camera has an IP address and can function as a web server. This enables the cameras to be organized under the control of your network administrator, as well as configuring additional security by using a firewall.

**Three Access Levels**

	Setting	Control	Browsing of Image
Level 1	○	○	○
Level 2	○	○	○
Level 3	○	○	○

View images from up to 8 cameras, in groups of four, in a tiled window. This ensures fast, efficient operation since it's not necessary to call up different windows from other areas.

### Efficient Monitoring with Many Convenient Functions

**Video Motion Detector (VMD) Function**  
 Detect any motion within the camera's field of view and output an alarm signal. This allows more time to operate external equipment, change the directions of cameras, initiate recording, etc. Up to four locations and three detection levels can be set for each camera.

**Pre-/Post-Alarm Function**  
 When an alarm is sounded, 30 images totally before and after the alarm activation can be continuously stored to ensure the capture of important video details.

**Alarm Mail & Image Transfer Function**  
 This function automatically notifies of alarms from the motion detector or external sensors by e-mail. You can attach one alarm image.

**Automatic Imaging/Transfer Function**  
 This function designates the conditions, such as day, time, or time interval, etc. to automatically take/transfer images. By using this function, you can also update images automatically on your home page.

### Checking the Alarm Image

### One click reproduction of desired images from up to 60 alarm archives

<Alarm Log List>  
 Check the date, time, and type of alarms at a glance, and call up the desired image just by clicking a button.

**Storing up to 60 alarm images**  
 The WV-NM100 is capable of storing up to 60 alarm images (JPEG only) within the camera body. Later, archive images to the FTP server for long-term storage.

### Easy checking of alarm image details

<Control Button>  
 A simple mouse operation on the screen icon will enable reproduction, reverse reproduction, etc. of alarm images.

### Alarm Log List Menu

Alarm log list

Control

JPEG

Even

JPEG images can either be sent forward or backward one frame at a time.

Images can be increased up to twice the size of the original.

### Simple Menu Selection

**Top Menu**

The Initial Software Menu Screen allows quick access to the "Camera Control," "Alarm List," and "Setting" menus from the Top Menu.

### Easy-to-Understand Setting Functions

**Basic Setting Menu**

This menu allows for the adjustment of settings for intended applications and the network environment, such as camera name, JPEG/MPEG-4 modes, image size, and image quality.

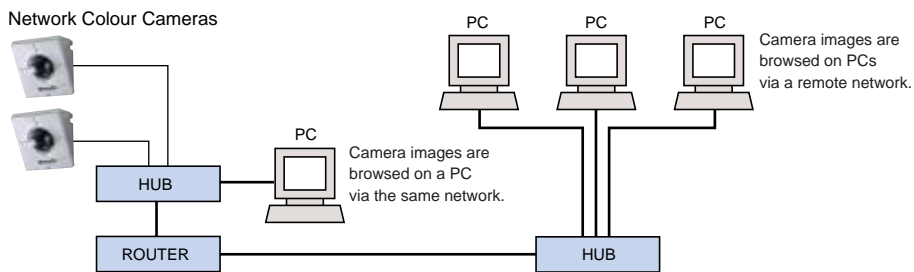
**Preset Registration Menu**

Register up to 8 camera locations in advance. Designate a screen title consisting of up to 32 alphanumeric characters for each of the camera positions.

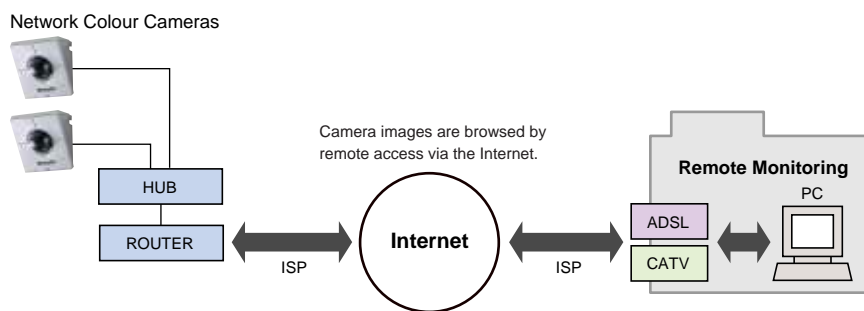
# Via an Intranet or Internet. The versatility to accommodate either system.

## SYSTEM EXAMPLES

### 1 Monitoring System Utilizing an Intranet



### 2 System utilizing the Internet



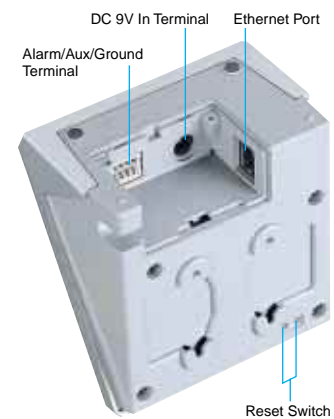
## MAJOR OPERATING CONTROLS

### Front View



LED Display

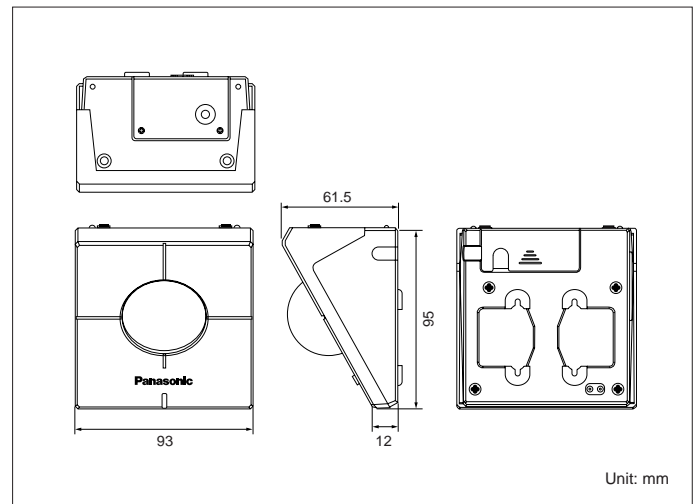
### Rear View



## SPECIFICATIONS

Camera Function	
Pick-up Device	1/4-type solid state image sensor
Effective Pixels	660 (H) x 492 (V) pixels
Min. Illumination	2 lx (electronic sensitivity x 10), 10 lx (electronic sensitivity off)
Picture Sampling at Image Sensor	30 ips
Lens	Fixed focal type
Panning Angle	140 degree (±70°)
Tilting Angle	120 degree (+30° - -90°)
Pan / Tilt Preset	Eight (8) position
Network Function	
Image Compression Type	JPEG / MPEG4 Selectable (requires standard plug-in software for MPEG4)
Image Size	JPEG: VGA (640 x 480), GVGA (320 x 240), QQVGA (160 x 120) MPEG4: CIF (352 x 288), QCIF (176 x 144)
Protocol Supported	TCP/IP, UDP/IP, HTTP, FTP, SMTP, RTP, DNS, DDNS, DHCP, ARP, BOOTP, SNMP, NTP
Network	10Base-T / 100Base-TX (RJ-45 x 1)
General	
Alarm Interface	Alarm input x 1, Alarm output x 1, Aux output x 1
Power Supply	DC9V (AC Adaptor is standard accessory)
Power Consumption	9W
Ambient Operating Temperature	0°C - +40°C
Dimensions	93 (W) x 95 (H) x 61.5 (D) mm
Weight (approx.)	180g (except AC adaptor)

## APPEARANCE

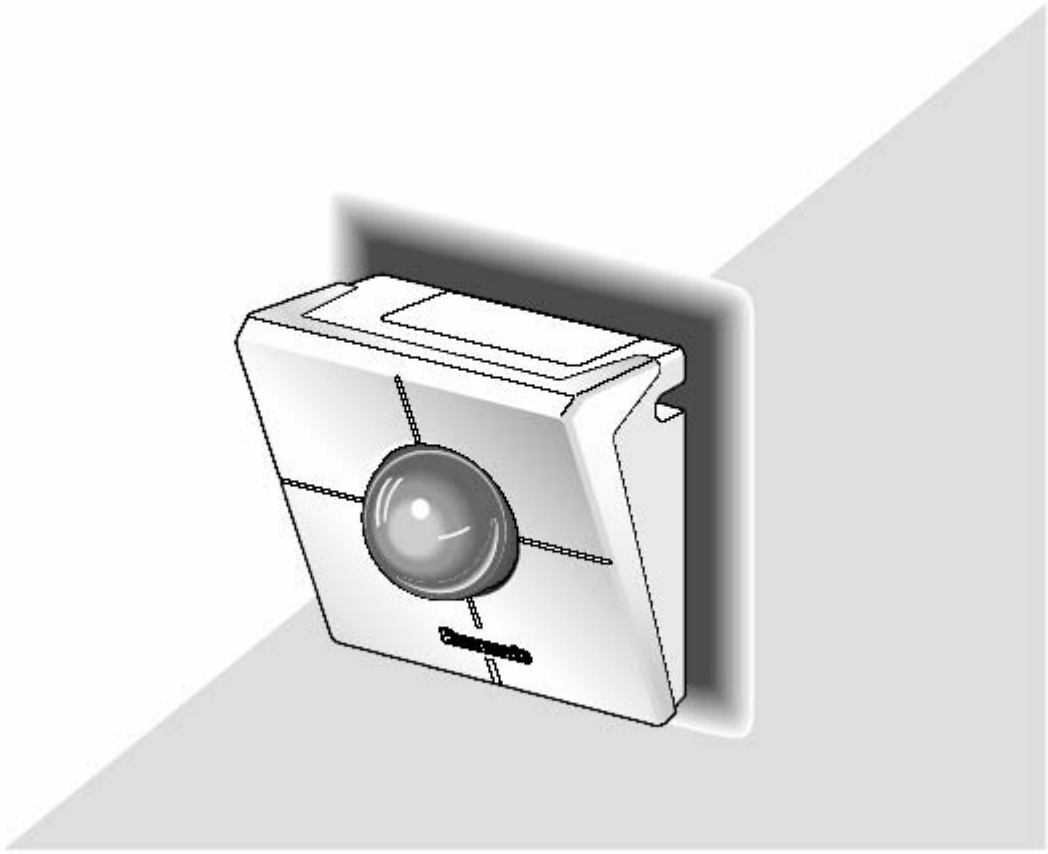


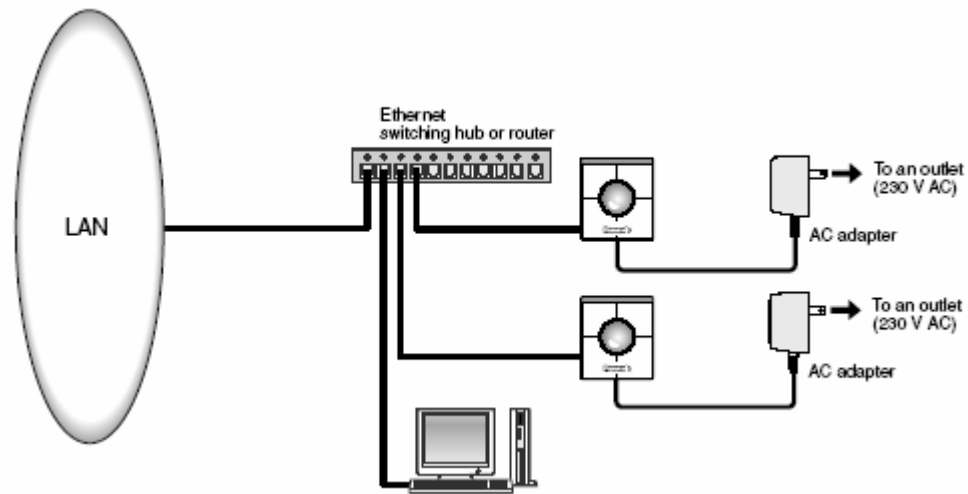
• All pictures in menu are simulated. • Weights and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations.

### DISTRIBUTED BY:

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**Matsushita Communication Industrial Co., Ltd.**  
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<http://www.mci.panasonic.co.jp/english/prdct/cctv/index.html>

**Panasonic**  
 Panasonic is the brandname of Matsushita Electric.  
 Printed in Japan WV-JKNM100C (2N-700)

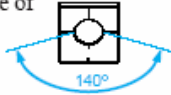




## One click monitoring

### <One Time Pan Function>

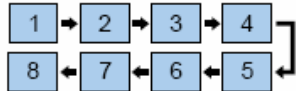
One click of a button horizontally pans the camera back and forth within a range of 140 degrees.



## Automatic patrolling of up to 8 locations

### <Preset Scan Function>

Just a single click brings up cameras in a preset sequence.



## One click to view the desired camera location

### <Preset Function>

One click brings up any camera set in up to 8 locations.

## Camera Setting Menu

## Selecting the optimum image

### <Image Size>

JPEG: 3 sizes in VGA (640 x 480), QVGA (320 x 240) and QQVGA (160 x 120)

MPEG-4: 2 sizes in CIF (352 x 288) and QCIF (176 x 144)

### <Selection of Image Quality>

JPEG: 4 options of Super Fine, Fine, Normal and Rough

MPEG-4: 3 options of Fine, Normal and Rough

## Maneuvering the camera directions at will

### <PAN/TILT Function>

Direct the camera up, down, right and left by maneuvering the icon on the screen with a mouse.



## Get in close

### <Zoom Function>

Just a single click will change the magnification of the display screen from x1.0, x1.5 or x2.0.

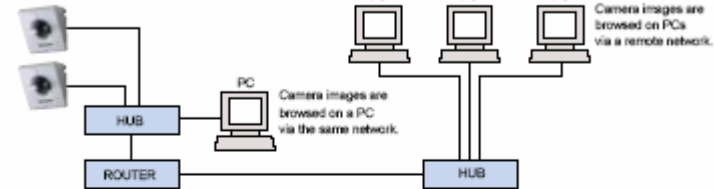


Up to 2x

## SYSTEM EXAMPLES

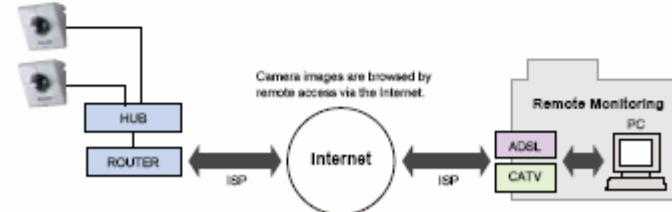
### 1 Monitoring System Utilizing an Intranet

Network Colour Cameras



### 2 System utilizing the Internet

Network Colour Cameras

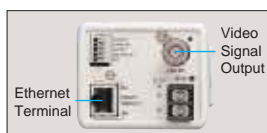




## BROADBAND CAPABLE: ONE NETWORK CAMERA FOR 24-HOUR SURVEILLANCE

New from Panasonic, the WV-NP472 directly connects to either digital or analogue devices. Simply set an IP address and connect it to an **Ethernet terminal** for monitoring and control from a personal computer.

Or use the analogue video out to connect to conventional monitoring systems using coaxial cable.



The WV-NP472 camera utilizes Panasonic's **Super Dynamic II** function to capture natural images at entryways, near windows, and in other locations with harsh contrasts between light and dark. It automatically stores images in repose to inputs from motion detectors and external sensor alarms and can send images automatically as e-mail attachments. In addition, this colour camera can also control external devices, turning on lighting or starting a surveillance recorder working. It operates with only 0.8 lx of available light in colour mode and a mere 0.1 lx in black and white. Its **Day/Night switching** function automatically switches to black-and-white recording when available light is low. Thus, this single security camera can deliver 24-hour surveillance.

The WV-NP472 is designed for monitoring over a WAN or over the Internet a snap. Its sophisticated surveillance functions make this the network security camera of choice for a wide range of settings, including banks, office buildings, and franchise outlets.

### KEY FEATURES

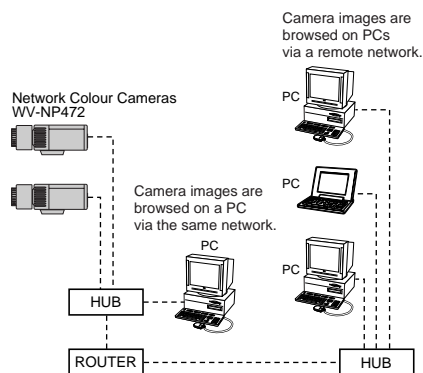
- 1/3-type double speed CCD colour image sensor.
- Built-in network interface (10Base-T/100Base-TX) for remote monitoring by PC.
- Interface protocol ; TCP/IP, HTTP, FTP, SMTP, DNS and DHCP.
- Switches from selected colour mode to B/W mode automatically or manually, for 24-hour monitoring.
- Built-in **Super Dynamic II** function has 80 times wider dynamic range when compared to a conventional camera.
- Super sensitivity of 0.8lx in colour mode, and 0.1lx in B/W mode at F1.4.
- 480-line in colour mode, and 570-line in B/W mode horizontal resolution.
- Built-in Alarm function for external security devices, and FTP alarm activation.
- Built-in digital motion detector.
- Built-in 16 alphanumeric character display.
- Electronic sensitivity enhancement (Auto; up to 10x, Manual; up to 32x, and Off)
- Digital signal processing LSI's for high quality pictures.
  - 2H vertical enhancement for greater picture sharpness.
  - Chroma averaging circuit for better colour signal-to-noise ratio.
  - Minimum of aliasing on fine objects.
  - Expanded dynamic range by knee circuit.
  - Highlight aperture correction for greater picture details of bright objects.
- VD2 sync capability with Panasonic system products.
- DC 12V power supply for easy installation.

### WIDE VARIETY OF OPTIONAL LENSES

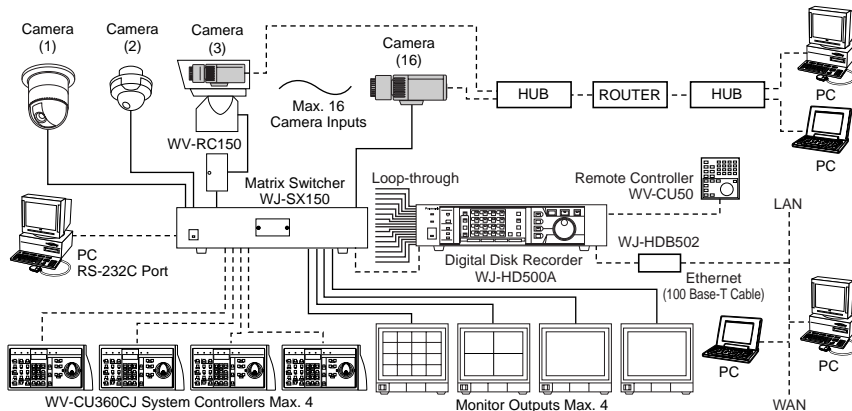
Auto Iris Lenses	High-Speed Lenses	Zoom Lenses	Vari-focal Lenses
WV-LA2R8C3B WV-LA4R5C3B WV-LA9C3B	WV-LA210C3 WV-LA408C3 WV-LA908C3	WV-LZ61/10 (x10) WV-LZ61/15 (x15)	WV-LZA61/2 WV-LZF61/2 WV-LZ62/8

# SYSTEM EXAMPLES

## 1 Monitoring System utilizing an Intranet



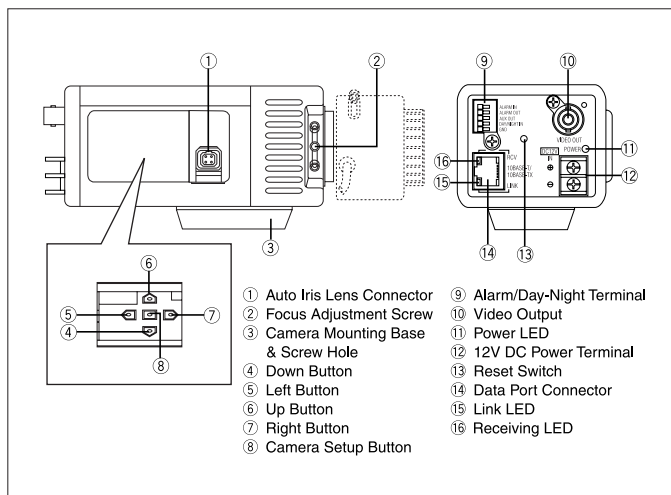
## 2 Monitoring with Panasonic Matrix Systems



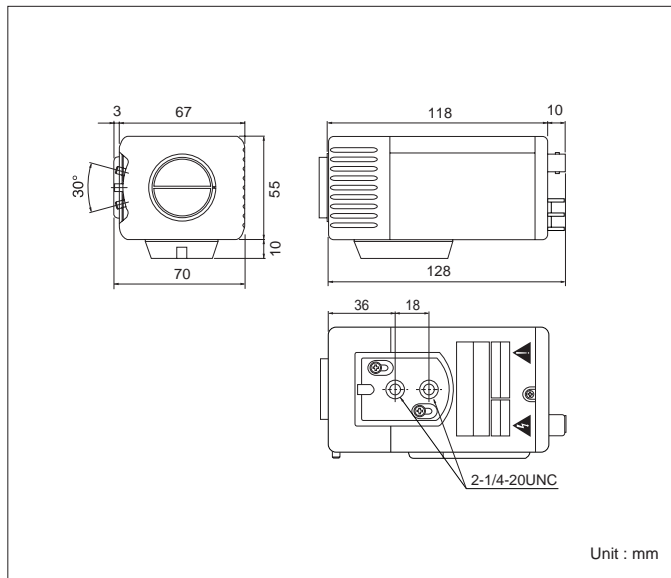
### SPECIFICATIONS PAL CCIR

Camera Function	
Pick-up Device	1/3-type interline transfer CCD image sensor
Effective Pixels	753 (H) x 582 (V) pixels
Synchronization	Internal or Multiplexed Vertical Drive (VD2) sync
H. Resolution	570-line at B/W mode, 480-line at colour mode
Min. Illumination	0.1lx at B/W mode, 0.8lx at colour mode at F1.4.
S/N Ratio	50dB (at AGC off)
D. Range	46dB (typical)
Lens Mount	CS-Mount
Super Dynamic II	On/Off Selectable
Electronic Sensitivity Up	Fix: 32x (max.), Auto: 10x (max.)
Motion Detector	On/Off Selectable
Colour/B/W Select	On/Off/Auto Selectable
Network Function	
Image Compression Type	JPEG
Image Size	JPEG: 752 x 568, 752 x 284, 376 x 284 and 188 x 142 (selectable)
Protocol	TCP/IP, HTTP, FTP, SMTP, DNS and DHCP
Alarm Activation	Alarm input, Motion detector
Alarm Notice	Alarm output / Mail by E-mail
Alarm Log	Maximum 100
Alarm Recording	Multi-shot
Interface	10Base-T/100Base-TX (RJ-45 x 1)
General	
Video Output	VBS1.0V[p-p]/75Ω, PAL Composite signal
Parallel Port	Alarm input x 1, Alarm output x 1, Aux output x 1, BW/colour select
Power Supply	DC12V
Power Consumption	700mA
Ambient Operating Temperature	-10°C ~ +50°C
Dimensions	67 (W) x 65 (H) x 118 (D) mm
Weight (approx.)	510g





### MAJOR OPERATING CONTROLS



### APPEARANCE



### OPTIONAL COMPONENTS

DIGITAL DISK RECORDERS	MATRIX SYSTEMS
<p>WJ-HD500A (with 16ch Multiplexer)</p> <p>WJ-HD200 (with 8ch Multiplexer)</p> <p>WJ-HD100</p> 	<p>SYSTEM850</p> <p>SYSTEM500</p> <p>SYSTEM150</p> 
DIGITAL MULTIPLEXERS	COLOUR MONITORS
<p>WJ-FS616C (16ch)</p> <p>WJ-FS416 (16ch)</p> <p>WJ-FS409 (9ch)</p> 	<p>WV-CM2080 55cm CRT</p> <p>WV-CM1780 45cm CRT</p> <p>WV-CM1480 40cm CRT</p> <p>WV-CM1420 37cm CRT</p> <p>WV-CM1020 25cm CRT</p> 

• Weights and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations.

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## OUR NEW BROADBAND CAPABLE AND SURVEILLANCE FEATURE-PACKED COLOUR DOME CAMERAS

The new Panasonic WV-NS320 Series can be connected to both analogue and digital networks. Colour camera, zoom lens, pan and tilt mechanisms are all combined in a single compact unit. When this camera is connected to an Ethernet network, you can operate it and monitor its images from a personal computer. Or, you can use it with an analogue colour composite signal as part of your existing surveillance systems using coaxial cable. With input from a motion detector or external sensor, it can automatically store images and attach them to e-mail or control external devices to turn on lights or start surveillance recording. Combining a 10x zoom lens with 5x digital zoom, it can zoom in for up to 50x close-ups. It operates in lighting as low as 1.0 lx and can pan a full 360°. The Flip-A-Chip feature makes it easy to capture subjects passing directly below the camera, the image-hold feature prevents blurring when the camera moves, and pre-set positions simplify operation.

Superb specifications and a host of convenience features make the WV-NS320 Series ideal for bank branch, franchise outlet or other network surveillance applications.

### OPTIONAL ACCESSORIES

Smoke Covers  
**WV-CS2S**  
**WV-CS2SH**  
Mirror Cover  
**WV-CS2M**

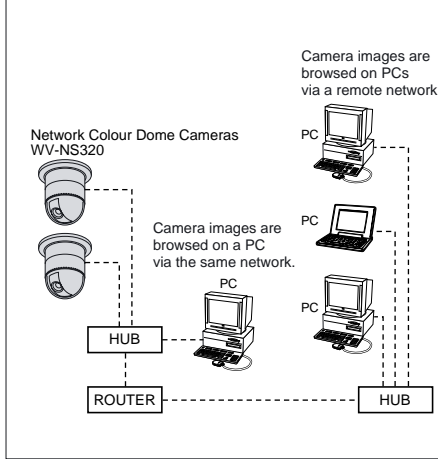


### KEY FEATURES

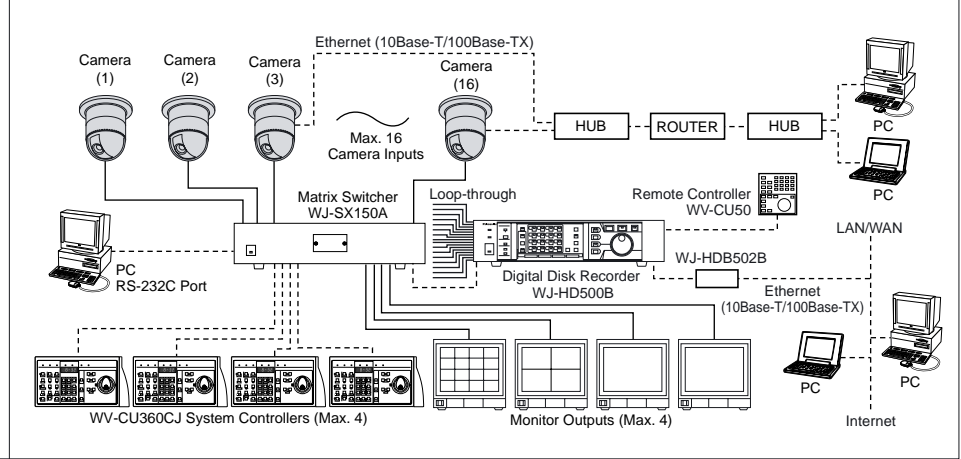
- Compact dome designed all-in-one unit colour surveillance camera.
- Both analogue video output and digital Ethernet port are available.
- Built-in network interface (10Base-T/100Base-TX) for remote monitoring by PC simply. (Internet interface protocol; TCP/IP, UDP/IP, HTTP, FTP, SMTP, DNS, DDNS, DHCP, NTP and BOOTP)
- Built-in Alarm function for external security devices, and FTP alarm activation.
- JPEG image size : 752 x 568, 752 x 280, 368 x 280 and 176 x 136
- 1/4-type CCD colour image sensor with 752H x 582V pixels.
- 480-line of horizontal resolution.
- Min. illumination of 1.0 lx (at AGC High).
- Built-in Flip-A-Chip function.
- Image hold function during panning.
- 360° endless panning range.
- Auto panning with rotation speed of 100°/s.
- 10x optical zoom (4.2 - 42mm at F1.4) plus 5x electronic digital zoom lens provided (total zoom capacity of 50x).
- Auto focus lens mechanism.
- Alarm input/output terminal connectors
- Built-in digital motion detector.
- Built-in alphanumeric character display.
- Electronic sensitivity enhancement (Auto; up to 10x, Manual; up to 32x, and Off)
- Digital signal processing LSI's for high quality pictures : 2H vertical enhancement, Chroma gain, Pedestal, Hue and Noise reduction circuit.
- Multiplexed Vertical Drive (VD2) sync capability with Panasonic system products.

# SYSTEM EXAMPLE

## 1 Monitoring System utilizing an Intranet



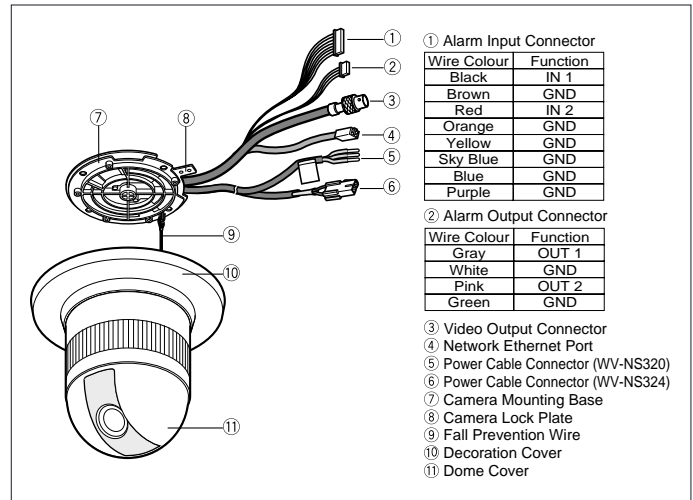
## 2 Monitoring with Panasonic System Products



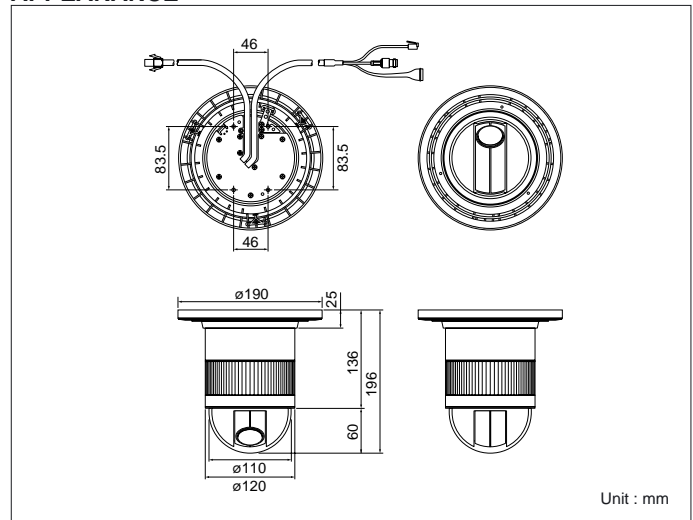
### SPECIFICATIONS PAL

Model No.	WV-NS320	WV-NS324
Pick-up Device	752 (H) x 582 (V)	
Scanning Area	3.57mm (H) x 2.67mm (V), 1/4-type CCD image sensor	
Synchronization	Internal/Line-Lock/Multiplexed Vertical Drive (VD2)	
Scanning	625 lines/50 fields/25 frames	
Scanning System	2 : 1 interlace	
Video Output	VBS1.0V[p-p]/75Ω, composite signal	
Resolution	H	more than 480 lines (at centre)
	V	more than 400 lines (at centre)
Minimum Illumination	1.0 lx at F1.4 (at AGC High)	
Signal to Noise Ratio	50dB (AGC OFF, Weight On)	
AGC	On (Low, Mid, High)/Off	
Title Display	On/Off	
Motion Detector	On/Off	
Flip-A-Chip Function	On/Off	
BLC	Selectable On/Off	
Set Up	Max. 4 times, Auto/Fix	
Alarm Input	2 Inputs (Alarm In 1-2)	
Alarm Output	2 Outputs (Alarm/Aux)	
Electronic Shutter	Off (1/50), 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 s	
Network Section		
Image Resolution	752 x 568, 752 x 280, 368 x 280, and 176 x 136	
Image Process	JPEG (Super Fine/Fine/Normal/Rough selectable)	
Image Refresh Rate	Fast/Middle/Slow/Very Slow	
Traffic Control	32/64/128/256/512/1,024 kbps and unlimited	
Internet Protocol	TCP/IP, UDP/IP, HTTP, FTP, SMTP, DNS, DDNS, DHCP, NTP and BOOTP	
Zoom Ratio	10x Optical plus 5x digital zoom (50x total)	
Max. Aperture Ratio	1 : 1.4 (Wide) ~ 2.0 (Tele)	
Focal Length	4.2 ~ 42mm	
Angular Field of View	H	4.9° ~ 47°
	V	3.7° ~ 36°
Zoom Speed	approx. 3.9s (Tele/Wide) in manual mode	
Focus Speed	approx. 3.0s (Far / Near) in manual mode	
Iris	Automatic (open/close)/manual	
Panning Range	360° endless	
Panning Angle Setting	Possible (in auto-pan mode)	
Panning Mode	Manual/auto pan	
Panning Speed	Manual: approx. 1.0°/s ~ 100°/s Preset position: max. 100°/s	
Tilting Range	0° ~ 92°	
Tilting Mode	Manual	
Tilting Speed	Manual: approx. 1.0°/s ~ 100°/s Preset position: max. 100°/s	
Controls	Pan/tilt, lens, preset position, home position	
Controller I/F	Multiplex-Coaxial	
Power Supply	220V - 240V AC, 50Hz	24V AC, 50Hz
Power Consumption	16W	15W
Ambient Operating Temperature	-10°C ~ +50°C	
Ambient Operating Humidity	Less than 90%	
Dimensions	ø120 (D) x 196 (H) mm (ø110mm diameter dome size)	
Weight	Approx. 2kg	

### MAJOR OPERATING CONTROLS



### APPEARANCE



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# Panasonic

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Printed in Japan  
(2N-709)

**Panasonic**  
ideas for life

Vandal Proof  
Network Colour Dome Cameras  
(with Low-Light B/W Mode)

**WV-NW470S Series**



Network Interface

Vandal Proof

Weather Proof

Day/Night Operation

The Perfect vandal proof camera solution ...



**NETWORK  
CAMERA**

**SDII**  
Super Dynamic

# A colour vandal proof camera designed for broadband networks.

The new WV-NW470S Series is the latest addition to Panasonic's full line of vandal proof cameras and can be connected directly to both digital and analogue networks. Connected to an Ethernet port, you can monitor its output or adjust settings from a networked PC. An analogue interface is also provided, allowing you to connect it to existing coaxial cable-based surveillance system. The ultra-tough, vandal proof body is loaded with features you want. Complete with a 2x variable-focal lens, Super Dynamic II technology, and automatic Day/Night switching for 24-hour monitoring. Plus, with its new networking capabilities, the WV-NW470S Series is just the solution you need for a variety of security applications.



Both an analogue video output and a digital Ethernet port are available.

## Network Interface



Vandal Proof Network Colour Dome Cameras (with Low-Light B/W Mode)

## WV-NW470S Series

For direct attachment to walls, ceilings, eaves



## FEATURE LOADED

## SIMPLE TO INSTALL

### Built-in network interface (10Base-T/100Base-TX)

Can be connected to an Ethernet network (10Base-T/100Base-TX) for remote monitoring by PC. (Internet interface protocol; TCP/IP, HTTP, FTP, SMTP, DNS, DDNS, DHCP, NTP and BOOTP)



### 480 lines of horizontal resolution in colour mode, and 570 lines in B/W mode

Equipped with a powerful 753(H) x 582(V) 1/3-type CCD, this camera delivers crisp clear images with 480 lines of horizontal resolution (in colour), and 570 lines in B/W mode.

### 2x variable-focal lens is standard equipment

Equipped with a 2x variable-focal lens plus an additional 2x electronic zoom, this camera can view their subjects in greater details.

### With Super Dynamic II, backlighting is no problem

With a 80 times dynamic range, Panasonic's proprietary Super Dynamic II processing yields clear images even in high-contrast or backlit lighting situations.

Set the lens aperture to the bright section, and the dark section is invisible.



Set the lens aperture to the dark section, and the bright section is invisible.

### Digital Motion Detector senses movement and sends an alarm signal

When the Motion Detector senses movement in the monitored image, it automatically sends an alarm signal to the system; reducing the chance of missing key images.



(Turns white only in demo mode)

### Character displays title

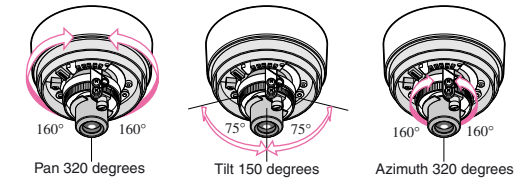
The monitor can display title up to 16 roman letters or numbers. By allowing instant identification of pre-set camera locations, this feature can help prevent errors during emergency situations.



(All of the above photographs were taken for the purpose of these explanations; actual images may be different.)

### Proprietary 3-D hinge makes adjustments easy

The 3-dimensional hinge (Pan, Tilt and Azimuth) allows the camera to be rotated as well as moved horizontally and vertically. Digital signal processing allows the image itself to be shifted up, down, left, right, or inverted. Choose precisely the camera angle you need; no camera makes it easier.



## HEAVY DUTY CONSTRUCTION

### Die-cast aluminum body : Shock Resistant

With a body made of die-cast aluminum and a dome made of 3.5mm thick polycarbonate, this camera is tough enough to resist severe shocks.

The camera lens unit is spring loaded, so the chassis can withstand external shocks.



### IP66 approved : Rain and Wind Resistant

Meets IP66 International standards. With the cameras excellent dust and moisture resistance, it can be used outdoors, under building eaves.



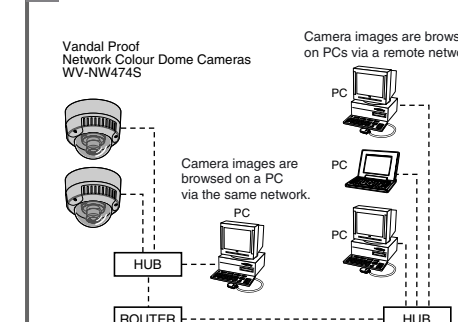
### Heater unit; WV-CW3H (Optional) Ideal for Varying Temperatures

The optional Heater Unit adjusts automatically to temperature fluctuations, helping to prevent dew condensation.

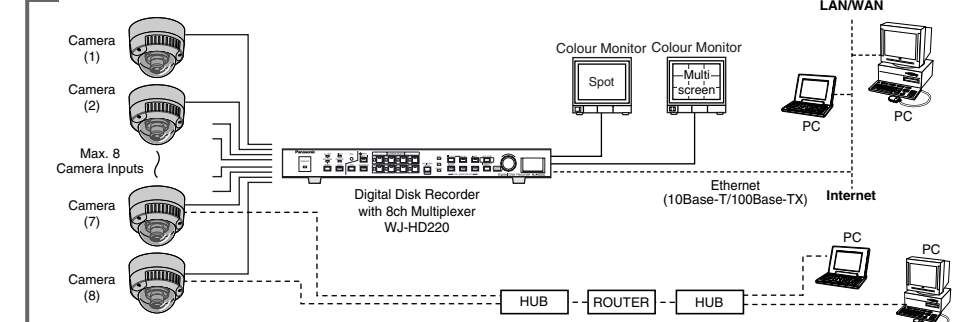


## SYSTEM EXAMPLES

### 1 Monitoring System utilizing an Intranet



### 2 Monitoring with Panasonic Digital Disk Recorder; WJ-HD220



### 24-hour surveillance with Day/Night Switching

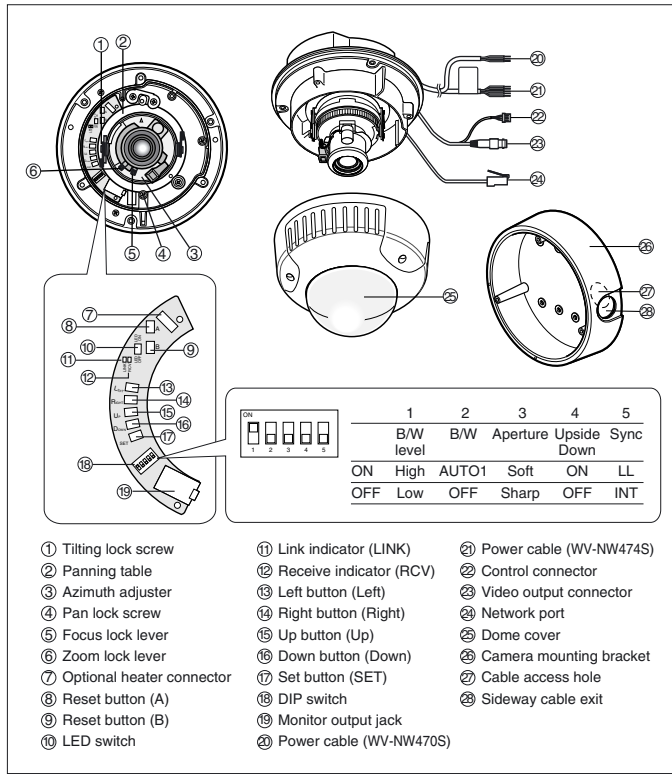
To allow 24-hour surveillance, this camera (in high-sensitivity mode) senses darkness and switches automatically from daytime colour, to nighttime black-and-white. A timer allows you to set the precise duration to meet any installation requirement. It can also be switched manually from colour to black-and-white.



### Full colour images at 0.8 lux Black-and-white images at 0.1 lux

This camera supports full colour surveillance in low-light situations (see parking lot example above), and switching to black-and-white mode allows surveillance in light as low as 0.1 lux.

## MAJOR OPERATING CONTROLS



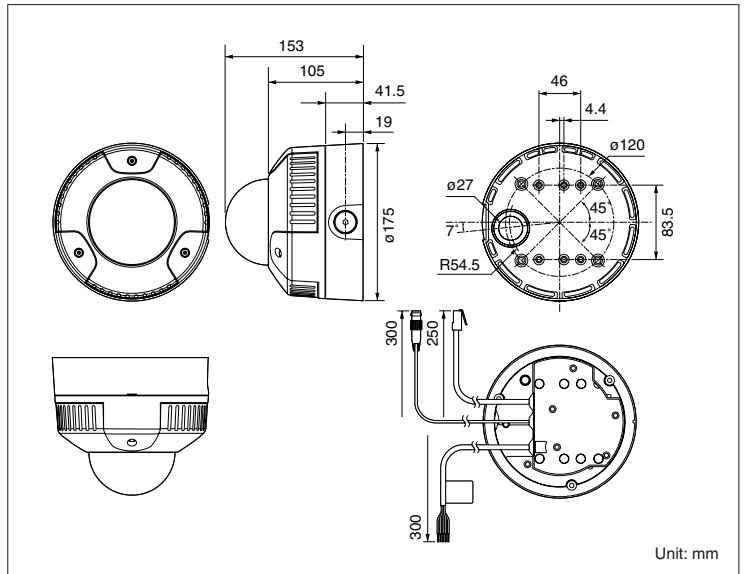
## SPECIFICATIONS PAL CCIR

Model No.	WV-NW470S	WV-NW474S
Type	Surface mount type	
Pick Up Device	753 (H) x 582 (V) pixels, interline transfer CCD	
Scanning Area	4.8 (H) x 3.6 (V) mm, (Equivalent to 1/3" tube)	
Scanning	625 lines / 50 fields / 25 frames	
Scanning System	2 : 1 interlace	
Synchronization	Internal / Line-Lock / VD2	
Video Output	VBS 1.0V [p-p] / 75 Ω / PAL/CCIR composite signal / BNC connector	
H.Resolution	480 lines at colour imaging mode, 570 lines at B/W mode (at centre)	
Minimum Illumination (at F1.4 Wide)	0.8 lux at colour imaging mode 0.1 lux at B/W mode	
Signal to Noise Ratio	50dB (at AGC Off, Weight On, AP On)	
Network Section	Image Resolution 752 x 568, 752 x 280, 368 x 280 or 176 x 136 pixels Image Process JPEG (Super Fine/Fine/Normal/Low image quality selectable) Image Refreshing Rate Fast/Middle/Slow/Very Slow Traffic Control 32 kbps, 64 kbps, 128 kbps, 256 kbps, 512 kbps, 1,024 kbps, Unlimited Protocols Supported TCP/IP, HTTP, FTP, SMTP, DNS, DDNS, DHCP, ARP, BOOTP, NTP OS Applicable Windows 98 SE, Windows NT WORKSTATION 4.0 Service Pack6a, Windows 2000 Professional Service Pack2, Windows ME, or Windows XP Applicable Browsers Internet Explorer 5.5, 5.5 SP2, 6.0, or Netscape Communicator 4.73, 4.78	
Functions	Camera Title 16 character display (alphabet, numeric, symbols) Light Control ALC / ELC Super Dynamic II On / Off Electronic Shutter Off, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 sec. AGC On (DNR-H) / On (DNR-L) / Off Electronic Sensitivity Up Off, Auto (x2, x4, x6, x10), Fix (x2, x4, x6, x10, x16, x32) White Balance ATW 1 / ATW 2 / AWC Motion Detector On / Off	
Lens	Type 2x variable focal lens Focal Length 3.8 - 8.0 mm Aperture Ratio F1.4 (Wide) to F176, close / F1.8 (Tele) to F176, close Min. Object Distance 1.2 m ~ ∞	
Power Source	220V ~ 240V AC, 50Hz	24V AC, 50Hz
Power Consumption	9.9W (18.9W with optional Heater Unit; WV-CW3H)	8.6W (12.1W optional Heater Unit; WV-CW3H only)
Ambient Operating Temperature	-10°C ~ +50°C (14°F ~ 122°F) -30°C ~ +50°C with optional Heater Unit (WV-CW3H)	
Ambient Operating Humidity	Less than 90%	
Dimensions (D) x (H)	ø175 x 153 mm	
Weight (approx.)	2.3 kg	

## OPTIONAL COMPONENTS & ACCESSORIES

Heater Unit <b>WV-CW3H</b> 	Smoke Dome Cover <b>WV-CW2S</b> 
Digital Disk Recorders <b>WJ-HD316</b> (16ch) <b>WJ-HD309</b> (9ch) <b>WJ-HD220</b> (8ch) 	MATRIX SYSTEMS <b>SYSTEM 850</b> <b>SYSTEM 500</b> <b>SYSTEM 150</b> 
Colour Monitors <b>WV-CM2080</b> 55cm CRT <b>PS-Data</b> <b>WV-CM1780</b> 45cm CRT <b>PS-Data</b> <b>WV-CM1480</b> 40cm CRT <b>PS-Data</b> <b>WV-CM1420</b> 37cm CRT <b>WV-CM1020</b> 25cm CRT 	Network Server Software <b>WV-AS710A</b> 

## 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.

- All TV pictures are simulated. •Weights and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations.

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 Fax 81(0)45-540-5773  
 URL <http://panasonic.co.jp/pss/cctv/en/index.html>

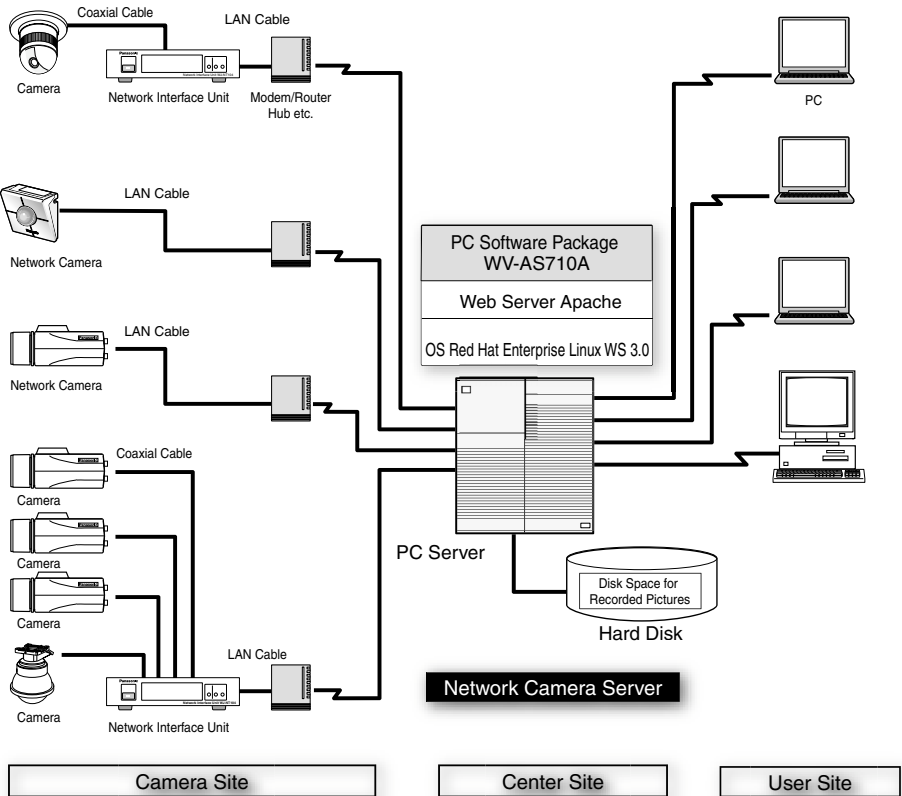
# Panasonic

Panasonic is the brandname of Matsushita Electric.  
 Printed in Japan WV-JKNW470SC (2N-716B)

# FEATURES

## ■ Introduction

The PC Software Package WV-AS710A (hereinafter referred to as WV-AS710A) is designed to monitor pictures from cameras at remote locations on personal computers (PCs) via an IP network such as the Internet/Intranet. Install the WV-AS710A in a PC server whose OS is Red Hat Enterprise Linux WS 3.0 to run the network camera server (a PC server in which the WV-AS710A is installed is referred to as a network camera server in this operating instructions). Users can monitor the pictures using web browsers on PCs.



## ■ Network Connection Types

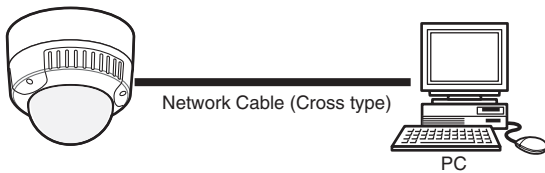
Prior to connections, specify the connection type and prepare relevant devices and cables.

### Notes:

- We recommend that you use connection type 1 or type 2 when setting up the network address of the camera.
- Be sure to unplug or switch all the devices off, then start connections.

### ● Direct Connection to PC (Type 1)

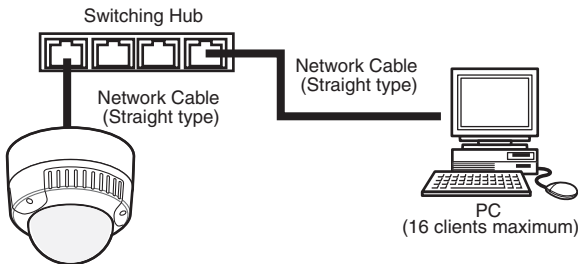
Use a cross-type network cable in the category 5 to connect the camera directly with the PC.



**Necessaries:** Cross-type network cable (Category 5)

### ● Connection to Intranet (Type 2)

A switching hub connected to the intranet is placed between the camera and the PC.

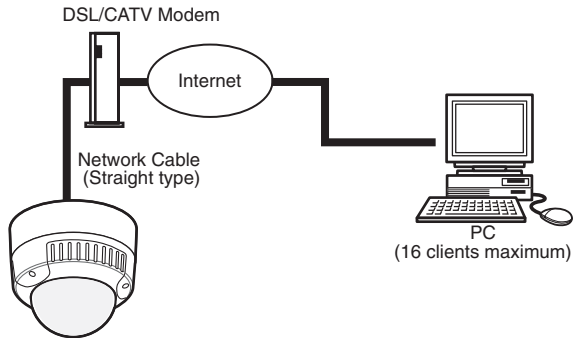


### Necessaries:

- Straight-type network cable (Category 5)
- Switching hub or router (10BASE-T/100BASE-TX applicable)

### ● Connection to Internet (Type 3)

The PC accesses the camera through the Internet and the DSL/CATV modem.

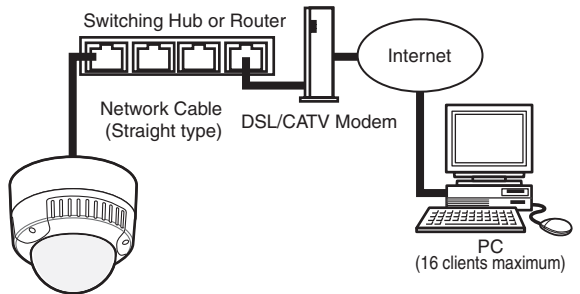


### Necessaries:

- Straight-type network cable (Category 5)
- CATV modem (cable modem) or DSL modem

### ● Connection to Internet (Type 4)

A switching hub or a router may be added to type 3 connection.



### Necessaries:

- Straight-type network cable (Category 5)
- CATV modem (cable modem) or DSL modem
- Switching hub or router (10BASE-T/100BASE-TX applicable)

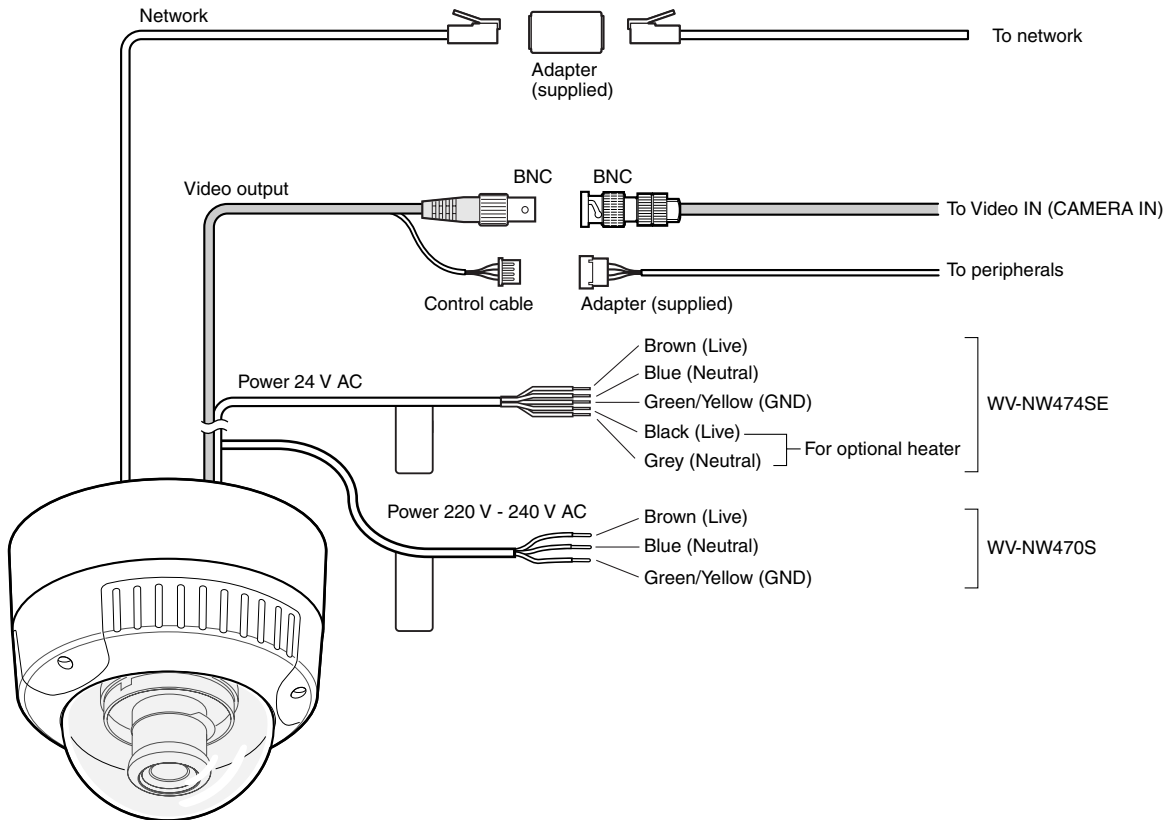
### Notes:

- Setting the router is required when connecting more than one camera. Refer to the manual included with the router.
- The camera does not support the PPPoE. Use a router that handles PPPoE when connecting the camera using that protocol.
- A global-type IP address is required when connecting via the Internet.

# ■ Connections

## Cautions:

- This product should be installed and connected in conformity with local codes by qualified service personnel or system installers.
- See page 2 for mains lead connection.
- Do not use a transformer with a capacity of more than 20 V A.
- Use a class 2 power supply.
- To prevent fire or electric shock hazard, use a UL listed cable (VW-1, style 1007) for 24 V AC connections.
- Be sure to connect the GND (grounding) lead of the camera and grounding terminal of the power supply.



## ● Power Connection

Use individual power sources for the camera and optional heater unit.

### • Wire colours & functions

#### 24 V AC Type

Wire colour	Function	Note
Brown	24 V AC Live	For camera
Blue	24 V AC Neutral	8.6 W
Green/Yellow	GND	
Black	24 V AC Live	For optional heater
Grey	24 V AC Neutral	12.1 W

#### 220 V - 240 V AC Type

Wire colour	Function	Note
Brown	220 V - 240 V AC Live	9.9 W (camera)
Blue	220 V - 240 V AC Neutral	18.9 W (with heater)
Green/Yellow	GND	

### • Cable length and wire gauge 24 V AC Type

The recommended cable length and thickness are shown in the table for reference. The voltage supplied to the power terminals of the camera should be between **19.5 V AC** and **28 V AC**.

Copper wire size (AWG)		#24 (0.22mm <sup>2</sup> )	#22 (0.33mm <sup>2</sup> )	#20 (0.52mm <sup>2</sup> )	#18 (0.83mm <sup>2</sup> )
Length of cable (approx.)	(m)	20	30	45	75
	(ft)	65	100	160	260

# Panasonic

Closed Circuit Video Equipment

Network Server Software

## WV-AS710

The Ideal Server Software  
for  
Video Storage and Distribution

**NSSS**  
Network Server Software

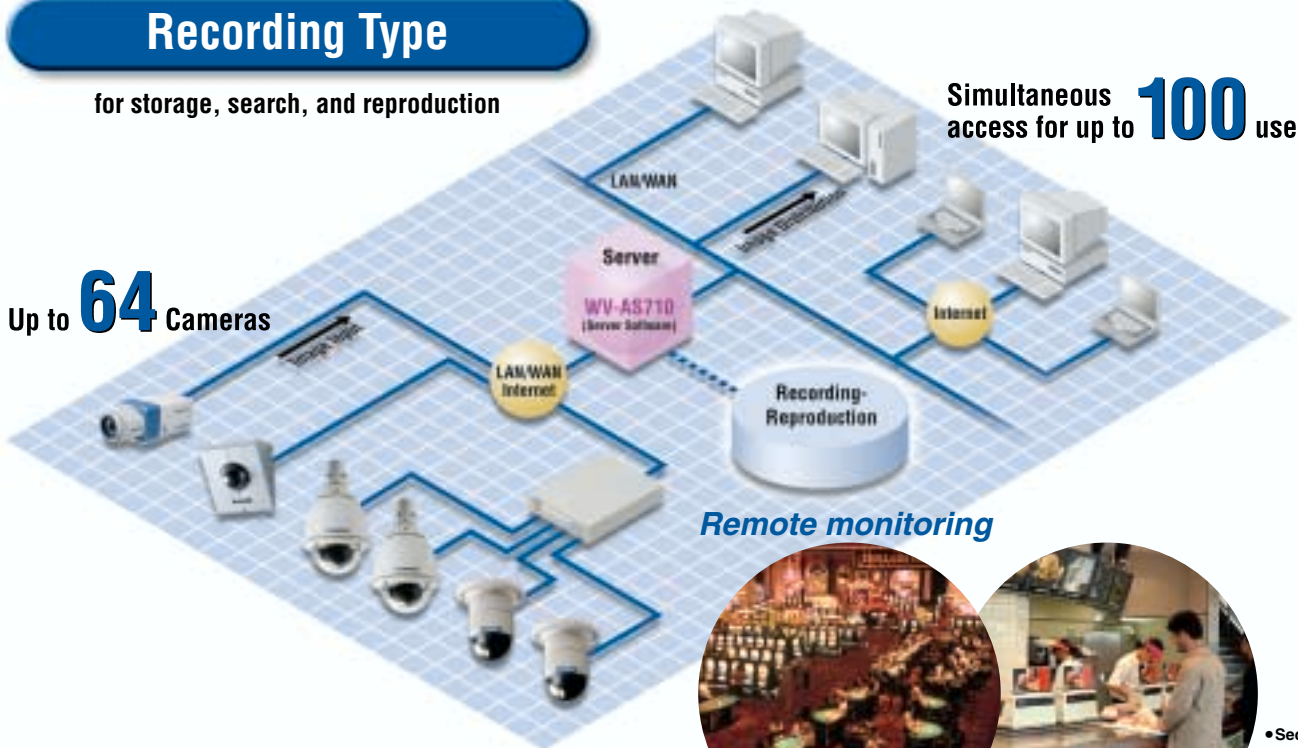
Choose from a huge array of applications!  
 Select the system type by the set-up menu, that is best  
 for your purpose.

## Recording Type

for storage, search, and reproduction

Simultaneous access for up to **100** users

Up to **64** Cameras



Remote monitoring



Hotels/Casinos



Franchise outlet

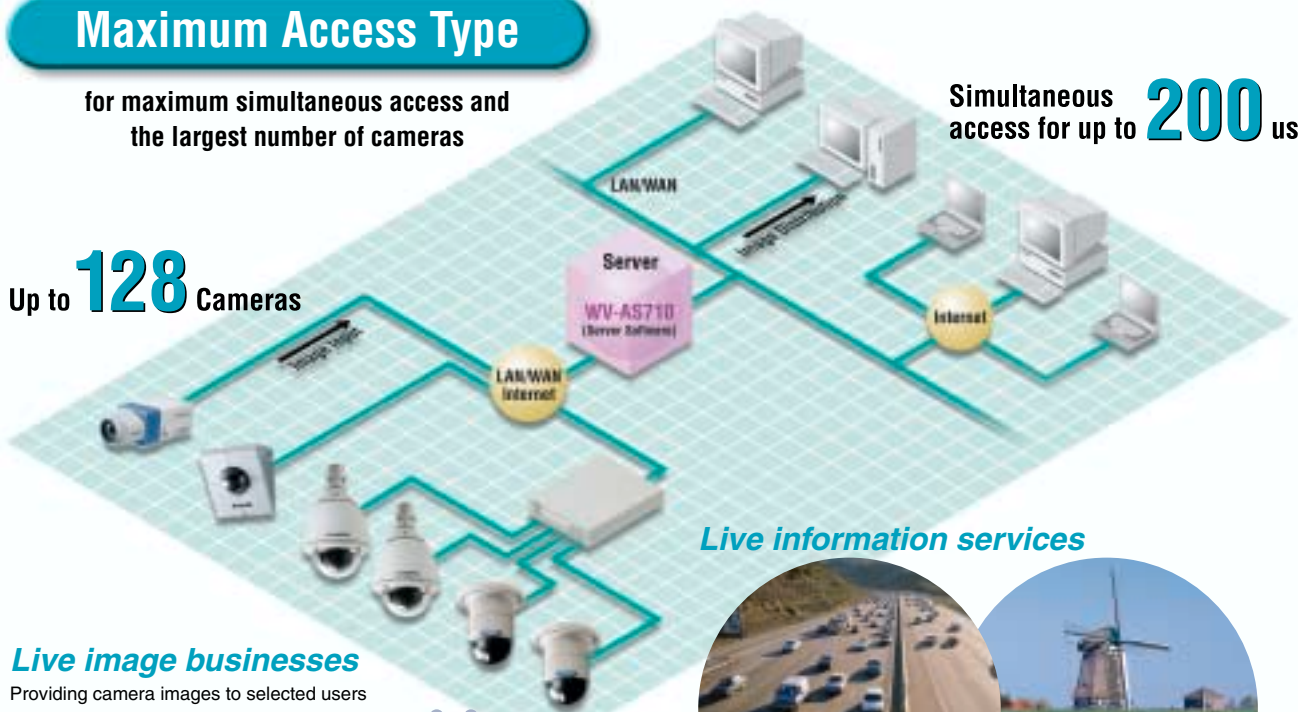
- Security service
- Shopping malls
- Banks
- Factories
- Warehouses
- Office buildings
- Schools

## Maximum Access Type

for maximum simultaneous access and  
 the largest number of cameras

Simultaneous access for up to **200** users

Up to **128** Cameras



Live information services



Transportation service

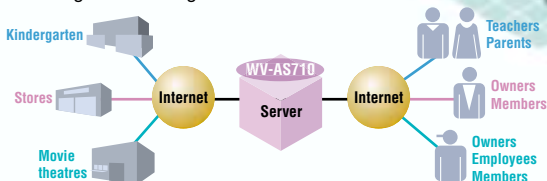


Travel information

- Theme park
- River traffic
- Exhibition
- Event

### Live image businesses

Providing camera images to selected users





# This easy to use interface controls a rich array of functions.

**This camera control menu allows you to control up to 128 cameras from a single interface.**

## One-click camera selection

### <Camera selection function>

You can instantly select the camera you want to use.

## Quick camera direction control

### <Preset functions>

Preset camera positions allow you to select a camera position with one click of your mouse.

## Take a closer look

### <Zoom Function>

Place the cursor over the zoom button and hold down the mouse button.



## Automatically Pans the area

### <Auto pan function>

At one click of your mouse, start panning a preset area.

## Recording Type Menu for Panasonic Dome Cameras via WJ-NT104



Select the image size.

The interface can control the Panasonic Dome Cameras: WV-CS850A/CS320/CW860 Series connected to Network Interface Unit WJ-NT104, or Network Cameras WV-NS320 Series/WV-NP472 via a direct Ethernet connection.

## See images from up to four locations at once.

Images from up to four cameras can be displayed simultaneously on the same monitor.



Click on a window to expand image to fill full screen

Character displays of each pre-set camera locations.

Four images from next camera

## Easy-to-understand system settings

System type selection, camera settings, recorded image settings, user settings, group name setting, alarm settings, schedule settings, data output, system shutdown and restart — all can be controlled from the system administrator menu.



## Exclusion functions prevent interference from other users.

Two types of exclusion functions prevent multiple users from using a camera at the same time.

### 1. Lock mode

When a user is operating a camera, all other users are excluded from its use. The lock is automatically released ten minutes after the last operation.

### 2. Timeout mode

The camera is automatically released when a preset time has passed since a user has taken control. The preset time can be changed from the settings display.

## A wealth of additional convenience features

### Live feed shutdown scheduling

Live feed distribution can be shut down automatically for preset days, times, or cameras. Up to 20 schedules can be constructed. Preset messages, e.g., "This camera has shut down for maintenance," can be distributed instead of the live feed.

### E-mail alarm notification

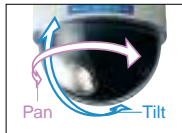
E-mail containing the date, time and camera number at which an alarm occurred can be sent automatically to designated users.

# Recording Type controls the way in which images are recorded, retrieved, and reproduced

## Camera direction control made simple

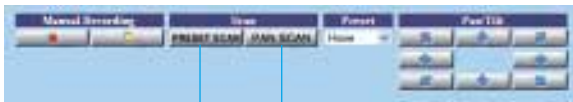
### <Pan/tilt function>

By moving your PC's mouse, you can point the camera up or down, left or right, in small, continuous increments.



### Recording Type menu for WV-NM100

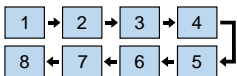
Conveniently controls the Network Colour Camera WV-NM100, which supports a direct Ethernet connection and MPEG-4 images.



### Patrol important sites automatically

#### <Preset scan functions>

Preset camera scan positions allow you to rotate through a preset sequence of cameras with one-click of your mouse.



### Take a quick look around

#### <Pan/scan function>

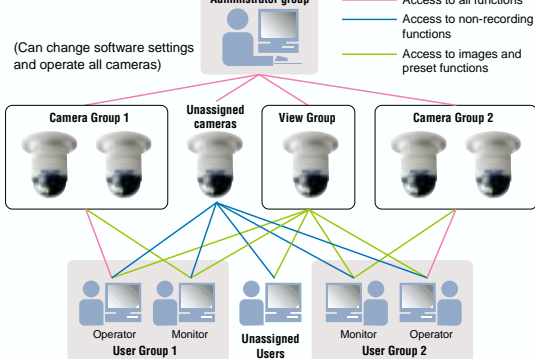
With one click, the camera tilts and swivels to look around a preset location.

## Security measures prevent unauthorized access

### Access levels can be set for groups and individuals

Specified cameras and users can be registered as groups. Operator or monitor user type can be assigned to control access rights.

#### Group and User Types



### User confirmation when checking access rights

When access to camera operation and system settings is restricted to certain users, a user ID and password are required to gain access to these functions.

### Hidden IP address

There is no need to worry about users having access to camera site IP addresses.

## Recording

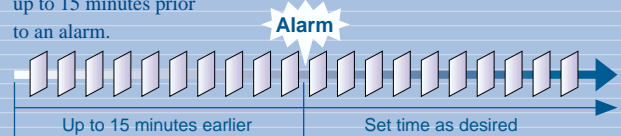
### Keep important scenes

#### Schedule recording

Images can be automatically recorded for preset days, times, and cameras. Up to 20 schedules can be constructed.

#### Pre- and post-alarm recording

If alarms go off, images are automatically recorded. Recordings can begin up to 15 minutes prior to an alarm.



#### Manual recording

To record an image, click on the record button in the camera control display. This function can only be used by the system administrators or users with a designated access level.

## Retrieval

### Instantly recall the scene you want to see

HTML is used to display both search results and links to the images you wish to receive. Click on the link to see the image.

#### <Event Search>

This function allows users to search event logs by camera number, date, time, and event content. Even content includes fixed alarms, video motion-detector alarms, and manual input.



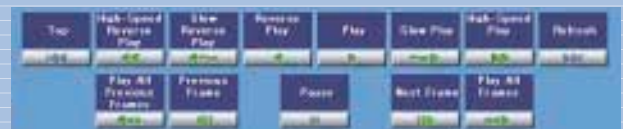
#### <Time / Date Search>

Automatically displays all images for the dates and times entered.

## Reproduction

### Like operating a VTR

High-speed play\*, high-speed reverse\*, slow-motion, pause, fast-forward\* --it's just like operating an ordinary VTR, using controls displayed on the monitor screen. All functions can be used while simultaneously viewing live feed from a camera. \*Only for JPEG images




## Exporting

### Exporting image data


Image data stored on the WV-AS710 server, can be exported to other directories for viewing using other systems. Exported images can be transferred to personal computers using FTP software.

## ADMINISTRATION MENU


### Change System Type



### Alarm Settings



### System Properties



## SYSTEM REQUIREMENTS

### Centre site

Item	Product requirements
<b>Computer</b> <sup>*1</sup>	
CPU	Pentium III 1.4GHz or faster
Memory	512MB or more
LAN card	100BASE-TX controller or 1000BASE-T/TX/SX controller (Installing three controllers is recommended: for camera sites, for user sites and for maintenance)
Hard disk	No recording: 2GB or more Recording JPEG: 17GB or more per camera (when recording 1fps for a week ) Recording MPEG-4: 16GB or more per camera (when recording 1.5Mbps for a day)
<b>OS</b>	Red Hat Linux 8.0 Professional
<b>Server</b>	Web server
	Apache 2.0.40 or later <sup>*2</sup> (IBM xSeries 330 Pentium III 1.40GHz or IBM xSeries 345 model 22X are recommended.)

\*1 Use a server compatible with Red Hat Linux.

\*2 Installed automatically if Red Hat Linux is installed with "Web server".

### Camera site

Item	Model number/Description
<b>Network interface unit</b>	WJ-NT104 Ver.1.21 or later
<b>Connectable cameras with WJ-NT104</b>	Cameras with PAL composite output connector
<b>Controllable cameras</b>	Cameras controllable by WJ-NT104 (WV-CS850A, WV-CS320, WV-CW860), and WV-NM100, WV-NP472 and WV-NS320 Network cameras
<b>Maximum camera number</b>	System type 1 (with recording): 64 cameras System type 2 (without recording): 128 cameras

### User site

Item	Description
<b>PC</b>	PC with recommended OS (see below) installed
<b>For browsing JPEG</b>	
Recommended OS	Microsoft® Windows® (98 Second Edition, Millennium Edition, NT 4.0 SP6, 2000 Professional, 2000 Server, XP Home Edition, XP Professional)
Recommended browser	Internet Explorer 5.5 SP2, Internet Explorer 6.0, Netscape Navigator 4.78
<b>For browsing MPEG-4</b>	
Recommended OS	Microsoft® Windows® (2000 Professional, 2000 Server, XP Home Edition, XP Professional)
Recommended browser	Internet Explorer 5.5 SP2, Internet Explorer 6.0

### About environment for the Internet and the web browser

#### •When accessing this software via the Internet

Depending on the traffic of the network or system form of the LAN (e.g. with or without firewall, etc.), html documents delivered by this software may not be displayed correctly. If your environment denies JavaScript and commands against CGI, html documents delivered by this software may not be displayed correctly since this software delivers html documents containing JavaScript and commands against CGI.

#### •When traffic of the network is heavy

When the transmission speed is slow or the traffic of the network is too heavy to receive image data, it may be hard to browse camera pictures, a still picture indicating failure of loading image data may appear. When this still picture appears frequently, adjust the interval time for loading (refreshing) image data.







### Standard accessories

CD-ROM for installation of the server software...1  
Installation guide...1

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## Reliable Panasonic Products Ideal for Use with WV-AS710

<p>Network Colour Camera <b>WV-NM100</b></p> 	<p>Network Security Colour Camera <b>WV-NP472</b></p> 	<p>Network Colour Dome Cameras <b>WV-NS320 Series</b></p> 	<p>Network Interface Unit <b>WJ-NT104</b></p> 	<p>Colour Dome Cameras <b>WV-CS850A Series</b> <b>WV-CS320 Series</b></p> 	<p>Weather Proof &amp; Vandal Resistant Colour Dome Cameras with Low-Light B/W Mode <b>WV-CW860 Series</b></p> 
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• All TV pictures are simulated. • Weights and dimensions are approximate. • Specifications are subject to change without notice. • These products may be subject to export control regulations.

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Fax 81(0)45-540-5773  
URL <http://panasonic.co.jp/psc/cctv/en/index.html>

# Panasonic

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