SONY

Network Camera

SNC-RZ50N

IPELA

INTEGRATED VISUAL COMMUNICATION

IPELA

SNC-RZ50N

Stunning video and audio brought to you by the **IPELA** series of visual communication products that encompass the three-pronged concept of "Reality," "Intelligence," and "Usability." **IPELA** is the identity symbolizing the SONY vision for the workplace of the future, connecting people, places, and information with reality that has never before been achieved. **IPELA** products let you share, understand, and experience as if you are actually there, when in fact, you are miles away. It allows you to quickly grasp a situation to make better business decisions.

Reality
- High Frame Rate (30 fps)
- High Sensitivity (Minimum illumination 1.0 lx)

Intelligence
- **Intelligent** Motion Detection
- **Intelligent** Object Detection
- Anti-tampering Function

Usability
- JPEG, MPEG-4, H.264† Compression Formats
- Dual Encoding Capability
- User-Friendly GUI

Real audiovisual communication over networks – this is business communication of the future, this is business communication brought to you today, this is the **IPELA** brand.

With its Feature Rich and Compact Design, the SNC-RZ50N PTZ Camera Is Ideal for a Wide Range of Monitoring Applications

The SNC-RZ50N is the latest in a series of Sony network cameras that incorporates advanced image processing technology to provide three compression formats: JPEG, MPEG-4, and H.264.[*1] *Users can choose any of the three compression formats to match the network environment and application requirements. Furthermore, with a newly developed "Dual Encoding Capability," the camera allows for simultaneous streaming in JPEG and MPEG-4, further expanding monitoring applications.*

In addition to its Pan/Tilt capability, the SNC-RZ50N is equipped with a powerful 26x optical zoom, allowing users to zoom in on small or distant objects with exceptional clarity. And because the camera incorporates a Day/Night function, it provides clear images in low-light environments and even in 0 lx[*2] *lighting conditions.*

Combining other convenient features, such as Intelligent Motion Detection, Intelligent Object Detection, Voice Alert, Built-in Compact Flash™ and PC card slots, and an Image Flip function, the SNC-RZ50N can be used for a wide variety of monitoring applications in location such as schools, shopping malls, public spaces, and more!

[*1] H.264 compressed video cannot be viewed using a browser. This function is planned to be available with a software upgrade in the future.

[*2] 0 lx means absence of visible light to the naked eye. A separate IR illuminator, available through third party vendors, is required for the camera to operate in 0 lx conditions.

Pan/Tilt/Zoom (PTZ) Capability *(Fig. 1, 2)*

The SNC-RZ50N is PTZ-capable with a pan range of 340° and a tilt range of 115°, enabling users to monitor a wide area. Also, with its powerful 26x optical and 12x digital (312x total) zoom, users can zoom in on small or distant objects with exceptional clarity.

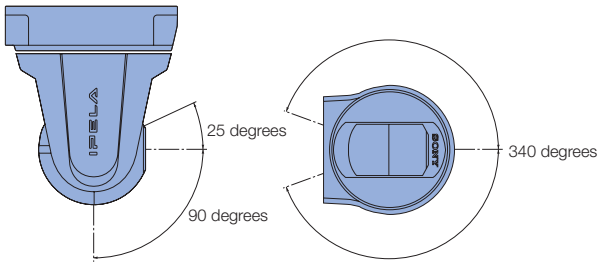


Fig. 1
Pan/Tilt Range

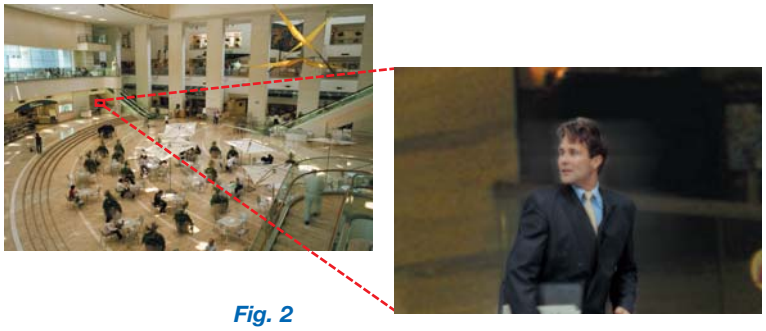


Fig. 2
26x Optical Zoom (simulated images)

Selectable JPEG, MPEG-4, H.264*3 Compression Formats

The SNC-RZ50N supports three compression formats, JPEG, MPEG-4, and H.264. MPEG-4 provides clear moving images efficiently over networks even with limited network bandwidth. For higher compression, when bandwidth is even more limited, H.264, which achieves two times more compression than MPEG-4, is available. If high quality still images are preferred, then the industry standard JPEG compression format can be chosen. The image size can be selected from three modes to meet user's network environment and application requirements.

*3 H.264 compressed video cannot be viewed using a browser. This function is planned to be available with a software upgrade in the future.

High-Quality Images

1/4-type Super HAD™ CCD

Employing the latest 1/4-type Super HAD CCD, the SNC-RZ50N delivers exceptional picture quality for user's remote monitoring applications. And with a minimum illumination level of 2.2 lx at F 1.6 in color, the camera captures high-contrast images even in low-light conditions.

Dynamic Frame Integration *(Fig. 3)*

The SNC-RZ50N incorporates Dynamic Frame Integration technology to reproduce clear and smooth images for both still and moving objects within an image. The camera detects movement within the image and reproduces those areas in the image with minimal blurring, while areas in the image with little or no movement are displayed naturally with minimal jagged edges. This unique algorithm also takes advantage of the interlace scanning CCD, which is inherently more sensitive than progressive scan CCDs, providing clear images even under low-lighting conditions.

Sony SNC-RZ50N Camera Image

Conventional Camera Image

Fig. 3 Image Comparison Between the Sony SNC-RZ50N and a Conventional Camera

High Frame Rate

The SNC-RZ50N supports a maximum frame rate of 30 fps when the image size is VGA (640 x 480) in both MPEG-4 and JPEG modes, producing clear and smooth-moving images. The frame rate can be set to meet user's network environment and system requirements.

Dual Encoding Capability *(Fig. 4)*

The SNC-RZ50N is equipped with a dual encoding capability that enables the camera to generate both MPEG-4 and JPEG images simultaneously. For example, you can set up your system to transfer MPEG-4 images over a WAN or an Internet VPN, where network bandwidth is limited, while storing high-resolution JPEG images on a server configured on the LAN.

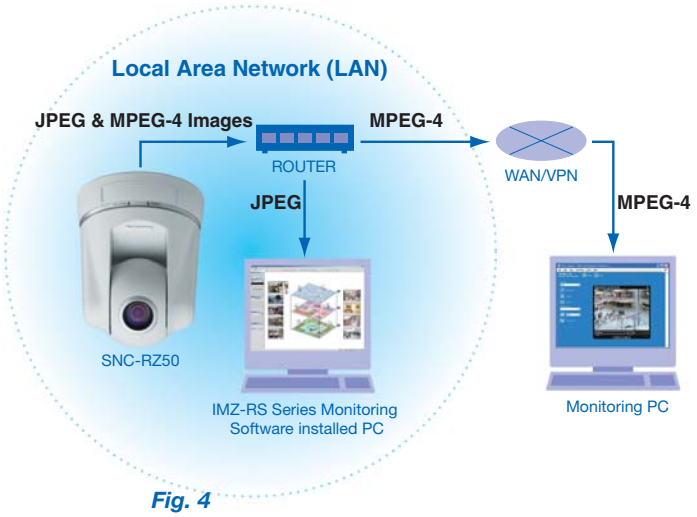


Fig. 4
Dual Image Encoding

Image Stabilizer

The image stabilizer function of the SNC-RZ50N minimizes the appearance of shaky images caused by low-frequency vibration so that stable and sharp images are provided. This function is useful for outdoor surveillance and traffic monitoring applications.

"Day/Night" Function

The SNC-RZ50N offers a "Day/Night" function to provide optimized sensitivity in both day and night environments. As the scene darkens, the infrared cut filter is automatically replaced with a clear filter and the camera switches to B/W mode, requiring a minimum illumination of less than 0.3 lx. In this mode, the camera is also sensitive to near IR illuminators, allowing it to operate even in 0 lx[*4] conditions.

[*4] 0 lx means absence of visible light to the naked eye.

Alarm Functions

Intelligent Motion Detection

The SNC-RZ50N is equipped with a built-in Intelligent Motion Detection function that can trigger a variety of actions such as storing and transferring images or that can trigger an external device through its output relays. Unlike conventional motion detection schemes where the current image is compared to the previous frame, the SNC-RZ50N utilizes the last 15 frames to perform motion analysis, and to trigger the alarm. This helps to prevent unwanted noise components from accidentally triggering an alarm, providing a more robust detection method, thus reducing the number of false alarms.

Intelligent Object Detection[*5]

The SNC-RZ50N can detect objects that have been left in one place for a specified duration. Up to four detection areas can be designated. This feature can be useful for applications such as detecting suspicious objects left in public spaces, or for detecting stalled cars or accidents on the road.

[*5] The Intelligent Object Detection function and Intelligent Motion Detection function cannot be used simultaneously.

Sensor IN/Alarm OUT ports

Equipped with two sensor inputs, the SNC-RZ50N can receive triggers from external sensors. Also, two alarm outputs can be used to trigger other devices to perform a variety of actions.

Pre-/Post-Alarm Image Storage

The SNC-RZ50N is capable of storing both pre-and post-alarm images on removable media when an alarm is triggered.

Image Transfer Using FTP/SMTP[*6]

All of the pre-/post-alarm images stored in the SNC-RZ50N at the time of an alarm event can be transferred to an FTP server for later viewing. Also, a still image at the time of an alarm event can be sent to a designated e-mail address.

[*6] All images transferred using SMTP are in JPEG format.

Anti-tampering Function*7

Incorporating a digital signature technology using Public Key Infrastructure (PKI), the SNC-RZ50N allows users to verify the origin of images and to help protect the integrity of images against tampering. This is done by creating a digital certificate for each camera manufactured and applying digital signatures in the form of metadata to all images produced by that camera; this combination provides an image produced by a camera is unique only to that camera.

*7 This function is available only with recording software that complies with the Sony digital signature scheme. For more details, please contact your nearest Sony dealer.

Network Features

Simultaneous Access

Up to 20 users can simultaneously access the SNC-RZ50N and monitor images separately.

Multicasting Capability

The SNC-RZ50N has a built-in multicasting capability for MPEG-4 and H.264 video. When configured with a multicast router, the unit can efficiently stream video and audio to a large number of users.

Network Security Features

IP Filtering

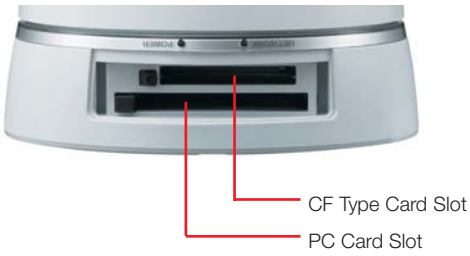
With IP filtering, access to the SNC-RZ50N can be restricted to one or more groups of selected users. Up to ten different groups can be established by defining an IP address range for each group.

Password Protection

User names and passwords can be assigned by the user to allow five levels of access to the SNC-RZ50N. The administrator has complete access/control of the cameras; while the other four levels of access can be set to limit user privileges to functions such as PTZ control, viewing, and trigger control.

Compact Flash™ Type Card Slot and PC Card Slot

Both Compact Flash and PC card slots are integrated into the SNC-RZ50N, enabling user to store images on removable media as required.



Wireless Capability

The SNC-RZ50N supports the IEEE802.11b compliant SNCA-CFW1 Wireless LAN Card. In addition, the optional SNCA-AN1 External Antenna can be used to transmit wireless signals over a longer distance. A wireless system configuration can save you time and money during installation.

Audio Capability

Bi-Directional Audio

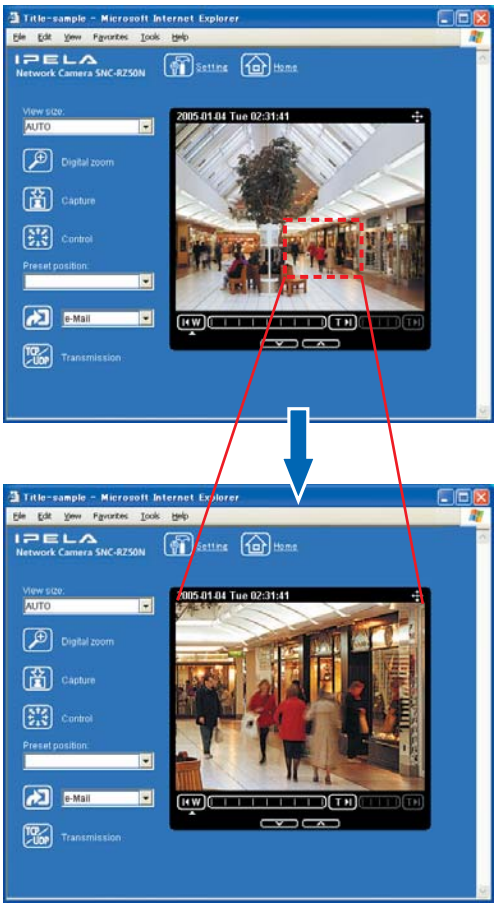
Users can connect an external microphone to the SNC-RZ50N, and pickup audio from a preferred location. This unit is also equipped with a speaker output, enabling users to send an active alert or make an announcement, significantly expanding the possibilities for remote monitoring applications.

Voice Alert

The Voice Alert function of the SNC-RZ50N allows users to upload a pre-recorded audio lfile that can be played back upon an alarm trigger, or on a pre-specified time schedule.

User-Friendly GUI *(Fig. 5)*

The SNC-RZ50N has a user-friendly GUI accessible via a PC running the Microsoft Internet Explorer® browser software. Setup is very easy with intuitive icons and pull-down menus. Directly pointing to and clicking on any part of the monitor image in the viewer will pan and tilt the camera so that the selected point is centered. Also, selecting an area on the image by holding down the left mouse button and dragging the mouse diagonally will enlarge and center the selected area in the monitor.



(simulated images)

Fig. 5
Intuitive GUI Operation

Compact and Stylish Design With Rear Cover

With its compact body and a stylish rear panel cover for cable management, the SNC-RZ50N is less likely to detract from the natural décor of the room in which it is installed.

Flexible Installation

The SNC-RZ50N can either be mounted to a ceiling or placed on a desktop. Because this camera incorporates an electronic "Image Flip" function, it displays images for proper upright viewing in either orientation in both the analog output as well as the browser view.

Analog Composite Video Output

The SNC-RZ50N can output an analog composite video signal via the BNC connector on the unit's rear panel. This feature is ideal for outputting image data to a local recording device or monitor.

RS-232C Interface

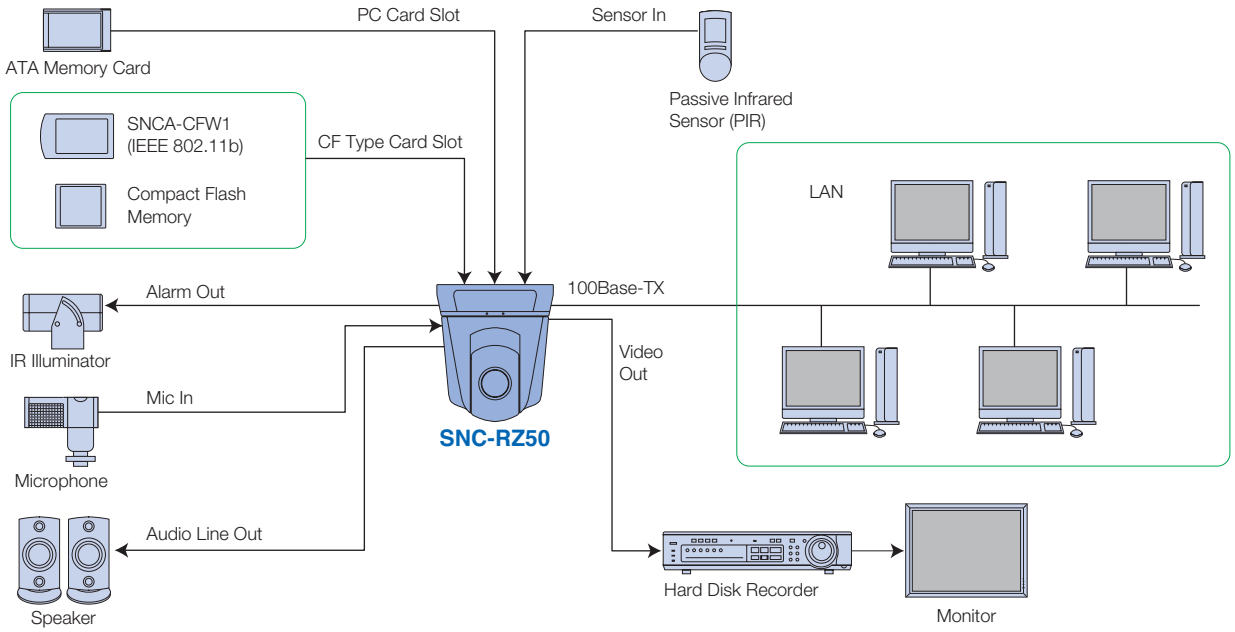
Transparency Function

The SNC-RZ50N has a transparency function available via the RS-232C interface. For example, external equipment connected to the camera via RS-232C can be controlled by a PC over a network.

VISCA™ Protocol

The SNC-RZ50N can interface with external control equipment using the Sony VISCA protocol. This configuration allows for local control of Pan/Tilt/Zoom and for camera settings.

SYSTEM CONFIGURATION



REAR PANEL

OPTIONAL ACCESSORIES

SNCA-CFW1
Wireless LAN Card

SNCA-AN1
Wireless LAN Antenna
(Optional accessory for the SNCA-CFW1 Wireless LAN Card)

YT-ICB550/T
In-ceiling Mount Kit
Tinted dome

YT-ICB550/C
In-ceiling Mount Kit
Clear dome

YT-MA550
Adaptor for the YT-ICB550

SPECIFICATIONS

	SNC-RZ50N
Camera	
Image device	1/4-type Super HAD CCD
Number of total pixels	630,000
Number of effective pixels	340,000 (711 x 485)
Electronic shutter	1 to 1/10,000 s
Gain control	Auto/Manual (-3 dB to +28 dB)
Exposure control	Auto (Full auto, Shutter-priority, Iris-priority), Manual, EV compensation, Backlight compensation
White balance mode	Auto, Indoor, Outdoor, One-push WB, ATW, Manual
Lens type	Auto-focus zoom lens
Zoom ratio	26x optical zoom (312x with digital zoom)
Horizontal viewing angle	1.7 to 42.0 degrees
Focal length	f=3.5 to 91.0 mm
F-number	F1.6 (wide), F3.8 (tele)
Minimum object distance	320 mm (wide),1,500 mm (tele)
Pan angle	-170 to +170 degrees
Pan speed	300 degrees/s (max.)
Tilt angle	-90 to +25 degrees
Tilt speed	300 degrees/s (max.)
Other functions	Day/Night, Intelligent Motion Detection, Intelligent Object Detection, Anti-tampering, Image stabilizer, Image Flip, Position preset
Image	
Image size (H x V)	640 x 480, 320 x 240, 160 x 120 (JPEG, MPEG-4, H.264)
Compression format	JPEG, MPEG-4, H.264
Maximum frame rate	
JPEG/MPEG-4	30 fps (640 x 480)
H.264	10 fps (640 x 480)
Audio	
Audio compression	G.711/G.726 (40, 32, 24, 16 Kb/s)
Network	
Protocols	TCP/IP, HTTP, ARP, ICMP, FTP, SMTP, DHCP, SNMP, DNS, NTP
Number of clients	20
Interface	
Ethernet	10Base-T/100Base-TX (RJ-45)
Serial interface	RS-232C (Transparency function or VISCA protocol)
Card slots	PC card x1, CF card x1
Analog video output	BNC x1, 1.0 Vp-p, 75 Ω
I/O port	Sensor in x 2, Alarm out x 2
External microphone input	Mini-jack (monaural, 2.2 K 2.5 V plug-in power)
Audio line output	Mini-jack (monaural), max output level: 1 Vrms
Analog video output	
Signal system	NTSC (Composite)
Horizontal resolution	450 TV lines
S/N ratio	more than 50 dB
Min. illumination	Color: 2.2 lx (50IRE, F1.6, AGC ON), B/W: 0.3 lx (50IRE, F1.6, AGC ON)
General	
Weight	2 lb 10 oz (1.2 kg)
Dimensions (W x H x D)	5 5/8 x 6 5/8 x 5 5/8 inches (140 x 166 x 142 mm)
Power requirements	DC 12 V
Power consumption	20 W max.
Operating temperature	32 ºF to 104 ºF (0 ºC to 40 ºC)
Storage temperature	-4 ºF to 140 ºF (-20 ºC to 60 ºC)
Supplied accessories	
	Ceiling-mount bracket(A), Ceiling-mount bracket(B), Screws x6, Wire rope, AC Adaptor, AC Cable, CD-ROM (setup software, operation manual), Installation manual Mount bracket cover, Shoulder screw, Plug retainer, Rubber feet x4
System requirements	
Operating system	Microsoft Windows® 2000/XP
Processor	CPU: Intel Pentium® IV 1.5 GHz or higher
Memory	RAM: 256 MB or more
Web browser	Microsoft Internet Explorer Ver. 6.0

Notes: You should keep in mind that the images or audio you are monitoring may be protected by privacy and other legal rights, and the responsibility for making sure you are complying with applicable laws is yours alone. Access to the images and audio is protected only by a user name and the password you set up. No further authentication is provided nor should you presume that any other protective filtering is done by the service. Since the service is Internet-based, there is a risk that the image or audio you are monitoring can be viewed or used by a third-party via the network.

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