

SONY



IPELA
INTEGRATED VISUAL COMMUNICATION

SNC-RZ50P Network Camera

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SNC-RZ50P

With its feature rich and compact design, the SNC-RZ50P PTZ Camera is ideal for a wide range of monitoring applications

The SNC-RZ50P 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. 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-RZ50P 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*¹ lighting conditions.

Features

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

The SNC-RZ50P 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.

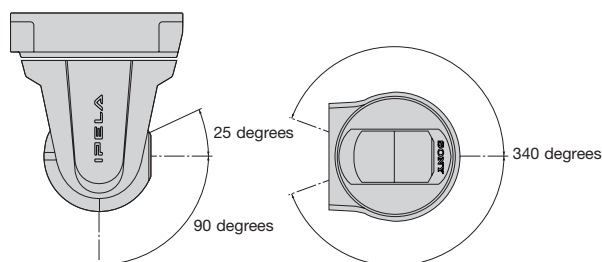


Fig. 1 Pan/Tilt Range



Fig. 2
26x Optical Zoom
(simulated images)



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-RZ50P can be used for a wide variety of monitoring applications in location such as schools, shopping malls, public space and more.

*1 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.

Selectable H.264, JPEG and MPEG-4 Compression Formats

The SNC-RZ50P 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 your network environment and application requirements.

High-Quality Images

1/4-type Super HAD CCD™

Employing the latest 1/4-type Super HAD CCD, the SNC-RZ50P delivers exceptional picture quality for your remote monitoring applications. And, with a minimum illumination level of 2.2 lx at F 1.6 in colour, the camera captures high-contrast images even in low-light conditions.

Dynamic Frame Integration (Fig. 3)

The SNC-RZ50P 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-RZ50P
Camera Image
Utilising Dynamic
Frame Integration



Conventional
Camera Image

Fig. 3 Image Comparison Between the Sony SNC-RZ50P and a Conventional Camera

Dual Encoding Capability (Fig. 4)

The SNC-RZ50P 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.

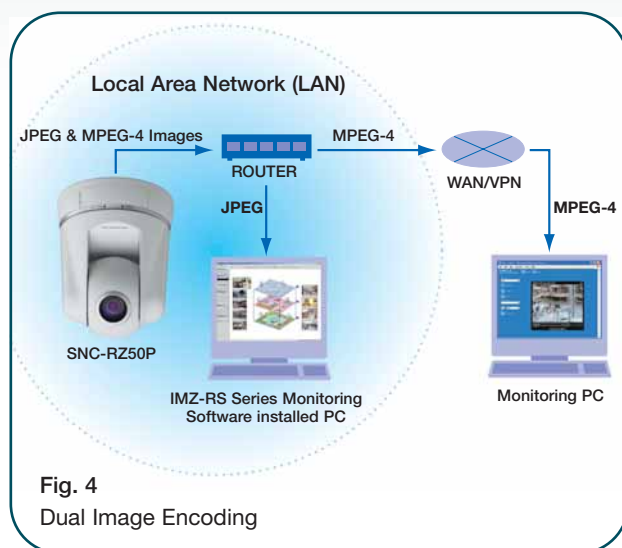


Fig. 4
Dual Image Encoding

Image Stabiliser

The image stabiliser function minimises 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-RZ50P offers a Day/Night function to provide optimised 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*² conditions.

*2 0 lx means absence of visible light to the naked eye.

Alarm Functions

Intelligent Motion Detection

The SNC-RZ50P 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-RZ50P utilises the last 15 frames to perform motion analysis and to trigger the alarm. This prevents unwanted noise components from accidentally triggering an alarm, providing a more robust detection method, thus reducing the number of false alarms.

Intelligent Object Detection*³

The SNC-RZ50P 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.

*3 The Intelligent Object Detection function and Intelligent Motion Detection function cannot be used simultaneously.

Sensor in/Alarm out

Equipped with two sensor inputs, the SNC-RZ50P can receive triggers from external sensors. Two alarm outputs can also be used to trigger other devices to perform a variety of actions.

Pre-/Post-Alarm Image Storage

The SNC-RZ50P is capable of storing both pre-and post-alarm images on removable media when an alarm is triggered.

Image Transfer Using FTP/SMTP*⁴

All of the pre-/post-alarm images stored 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.

*4 All images transferred using SMTP are in JPEG format.

Anti-tampering Function*⁵

Incorporating a digital signature technology using Public Key Infrastructure (PKI), the SNC-RZ50P allows users to verify the origin of images and ensure 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 assures that an image produced by a camera is unique to that camera.

*5 This function is available with a software upgrade. For more details please contact your nearest Sony dealer.

Network Features

Simultaneous Access

Up to 20 users can simultaneously access the SNC-RZ50P and monitor images separately.

Multicasting Capability

The SNC-RZ50P 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

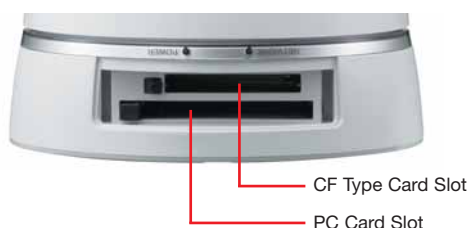
With IP filtering, access to the SNC-RZ50P can be restricted to one or more groups of selected users. Up to ten different groups can be established by defining an IP address range for each group.

Password Protection

User names and passwords can be assigned to allow five levels of access. 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-RZ50P, enabling you to store images on removable media as required.



Wireless Capability

The SNC-RZ50P 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 unit and pickup audio from a preferred location. This unit is also equipped with a speaker output, enabling users to send an alert or make an announcement, significantly expanding the possibilities for remote monitoring applications.

Voice Alert

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

User-Friendly GUI (Fig. 5)

The SNC-RZ50P 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 centre the selected area in the monitor.



Fig. 5
Intuitive GUI Operation
(simulated images)

Compact and Stylish Design With Rear Cover

With its compact body and a stylish rear panel cover for cable management, the SNC-RZ50P is less likely to detract from the natural décor of the room in which it is installed.

Flexible Installation

The SNC-RZ50P 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 analogue output as well as the browser view.

Analogue Composite Video Output

The SNC-RZ50P can output an analogue 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-RZ50P 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-RZ50P 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.

IPELA

Business is changing. The vision of integrated visual communication is becoming a reality with Sony IPELA – A suite of intelligent IP-based Network Video Monitoring and Videoconferencing products and solutions.

Sony IPELA utilises the rapidly expanding global IP broadband network and advanced high-resolution imaging technology to offer visual communications systems that enable customers to realise the Sony vision for the work place of the future, where better business decisions are made as a result of enhanced, real-time person-to-person and location-to-location communication.

Sony IPELA Network Video Monitoring solutions offer cost benefits and flexibility in the applications of Security, CCTV Surveillance, Remote Monitoring and Leisure. Complete solutions offer customers a choice of IP cameras, Network Video Recorders and Management Software.

Reality

- High Frame Rate (30 fps*)
- High Sensitivity (Minimum illumination 0.3 lx)
- High Picture Quality with Dynamic Frame Integration

* Max depending upon camera set-up

▶ **Great picture quality, even in low light**

Intelligence

- Intelligent Motion Detection
- Intelligent Object Detection
- Anti-Tampering Function

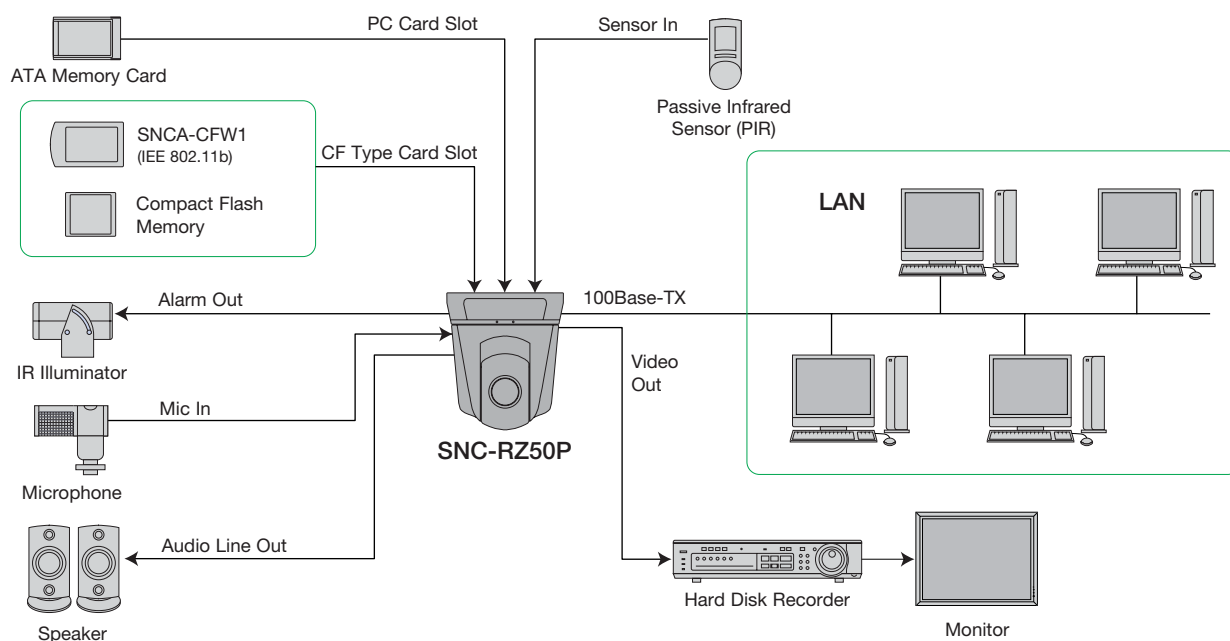
▶ **Your applications are enhanced by technology**

Usability

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

▶ **Flexible and user-friendly**

System Configuration



SNC-RZ50P Specifications

Camera

Image device	1/4-type Super HAD CCD
Number of total pixels	740,000 pixels
Number of effective pixels	400,000 (702X575)
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	25 fps (640 x 480)
H.264	8 fps (640 x 480)

Audio

Audio compression	G.711/G.726 (40, 32, 24, 16 Kb/s)
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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
Analogue video output	BNC x1, 1.0 Vp-p, 75 Ω
I/O ports	Sensor in x2, Alarm out x2
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

Analogue video output

Signal system	PAL (Composite)
Horizontal resolution	450 TV lines
S/N ratio	more than 50 dB
Min. illumination	Colour: 2.2 lx (50 IRE, F1.6, AGC ON), B/W: 0.3 lx (50 IRE, F1.6, AGC ON)

General

Mass	1.2 kg (2 lb 10 oz)
Dimensions (W x H x D)	140 x 166 x 142 mm (5 5/8 x 6 5/8 x 5 5/8 inches)
Power requirements	DC 12 V
Power consumption	20 W max.
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)

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.

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

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