

SONY[®]

Network Camera

SNC-RX550N



IPELA[®]
INTEGRATED VISUAL COMMUNICATION

IPELA

SNC-RX550

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.

The High-Performance Network Camera With 360-Degree Endless Rotation Delivers Efficient 24/7 Monitoring Operation – Anytime, Anywhere, Anyplace.

Sony introduces a new addition to its Network Camera Lineup, the SNC-RX550 Network Dome Camera, which combines the latest image processing technology to provide multiple compression formats and advanced functionality with a high-speed PTZ (Pan/Tilt/Zoom) capability.

Slip rings on the camera allow a full pan of 360 degrees, allowing users to monitor almost anywhere surrounding the camera using this single unit. In addition, equipped with a powerful 26x optical zoom, the camera allows users to zoom in on small or distant objects with exceptional clarity. Designed for 24/7 operation, the SNC-RX550 incorporates a Day/Night function, providing clear images even in 0 lx[†] lighting conditions. And using advanced image processing technology, the camera provides three compression formats; JPEG, MPEG-4, and H.264,[†] capabilities include dual encoding to allow simultaneous streaming in JPEG and MPEG-4, as well as high frame rates of 30 fps in both JPEG and MPEG-4.

Combining other intelligent features, such as Intelligent Motion Detection and Intelligent Object Detection into its stylish body, the SNC-RX550 is the right choice for a wide variety of surveillance and monitoring applications.



SNC-RX550N/B



SNC-RX550N/W

[†] 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.

[†] H.264 will be supported at a later date via a firmware upgrade.

FEATURES

360-degree Endless Pan/Tilt/Zoom Capability (Fig. 1, 2)

The SNC-RX550 has a high-speed 360° endless panning (or rotation) capability and a tilt range of 90°, which allows users to precisely capture almost any object surrounding the camera. Also, with its powerful 26x optical zoom (312x with digital zoom), users can zoom in on small or distant objects with exceptional clarity.

High-Quality Images and High-Sensitivity

Employing the latest 1/4-type Exwave HAD™ CCD, the SNC-RX550 delivers exceptional picture quality for your remote monitoring applications. And with a minimum illumination level of 1.0 lx at F 1.6 in color, the camera captures high-contrast images even in low-light conditions.

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

The SNC-RX550 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 is selectable. The image size can be selected from three modes to meet your network environment and application requirements.

† H.264 will be supported at a later date via a firmware upgrade.

High Frame Rate

The SNC-RX550 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 your network environment and system requirements.



Fig. 1
Pan/Tilt Range



Fig. 2
26x Optical Zoom (simulated images)

Dual Codec (Dual Streaming) Capability (Fig. 3)

The SNC-RX550 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.

Image Stabilizer

The image stabilizer function of the SNC-RX550N 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-RX550 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 0.15 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, utilizing IR illuminators.

Anti-tampering Function^{*3}

Incorporating a digital signature technology using Public Key Infrastructure (PKI), the SNC-RX550 allows users to verify the origin of images and helps prevent 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; thus, the image produced by a camera is unique only to that camera.

^{*3} This function is available only with recording software that complies with the Sony digital signature scheme. For more details, please consult your nearest Sony dealer.

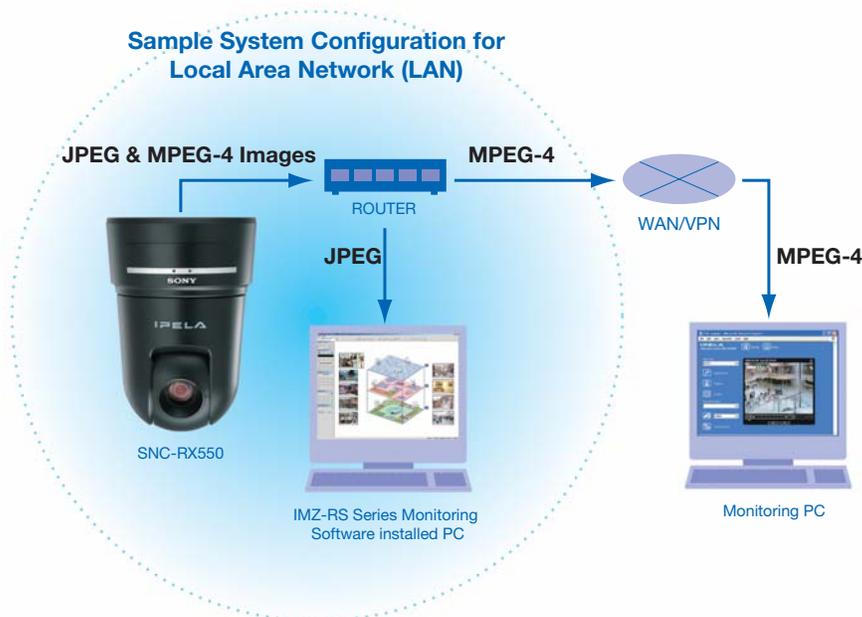


Fig. 3
Dual Codec (Dual Streaming)

Alarm Functions

Intelligent Motion Detection

The SNC-RX550 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 which typically detects luminance level differences, the SNC-RX550 utilizes the last 15 frames to calculate motion detection information and to trigger the alarm when motion is detected. This prevents unwanted noise components from accidentally triggering an alarm, providing more accurate detection and reducing the number of false triggers.

Intelligent Object Detection^{*4}

The SNC-RX550 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, detecting stalled cars or accidents on the road.

^{*4} The intelligent object detection function and motion detection function cannot be used simultaneously.

Sensor IN/Alarm OUT ports

Equipped with two sensor inputs, the SNC-RX550 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-RX550 is capable of storing both pre-and post-alarm images on removable media such as ATA memory cards and Memory Stick[®] media when an alarm is triggered.

Image Transfer Using FTP/SMTP^{*5}

All of the pre-/post-alarm images stored in the SNC-RX550 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.

^{*5} All images transferred using SMTP are in JPEG format.

Network Features

Simultaneous Access

Up to 20 users can simultaneously access the SNC-RX550 and monitor images separately.

Multicasting Capability

The SNC-RX550 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

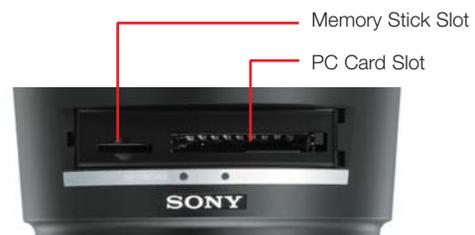
With IP filtering, access to the SNC-RX550 can be restricted to one or more groups of selected users. Up to ten different groups can be established by defining an IP address range for each group.

Password Protection

User names and passwords can be assigned to allow five levels of access to the SNC-RX550. 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.

Memory Stick Slot and PC Card Slot

Both Memory Stick[®] and PC card slots are integrated into the SNC-RX550, enabling you to store images on removable media as required.



Wireless Capability

The SNC-RX550 supports the IEEE802.11b compliant SNCA-CFW1 Wireless LAN Card when used in combination with a Compact Flash™ Type PC card adaptor. This type of wireless configuration can save you time and money during installation. In addition, the optional SNCA-AN1 External Antenna enables the transmission of wireless signal over a longer distance.

Bi-Directional Audio

Incorporating an external microphone input, the SNC-RX550 allows for audio as well as video monitoring. Users can pick up the desired sound from the preferred location. This unit is also equipped with an active output, enabling users to send an alert or make an announcement, significantly expanding the possibilities for remote monitoring applications.

Voice Alert Function

Users can upload an audio file to the camera. Upon trigger from a sensor or Intelligent Object detection feature, or schedule, the stored audio file can be played back.

User-Friendly GUI (Fig. 4)

The SNC-RX550 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.

Color Variation

Users can choose from two body colors, black or white, depending on the installation requirements of the site for the SNC-RX550.

Analog Composite Video Output

The SNC-RX550 also has 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-RX550 has a transparency function available via the RS-232C interface. External equipment can be connected and controlled by a PC connected to the network on which the SNC-RX550 resides.

VISCA™ Protocol

The SNC-RX550 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.

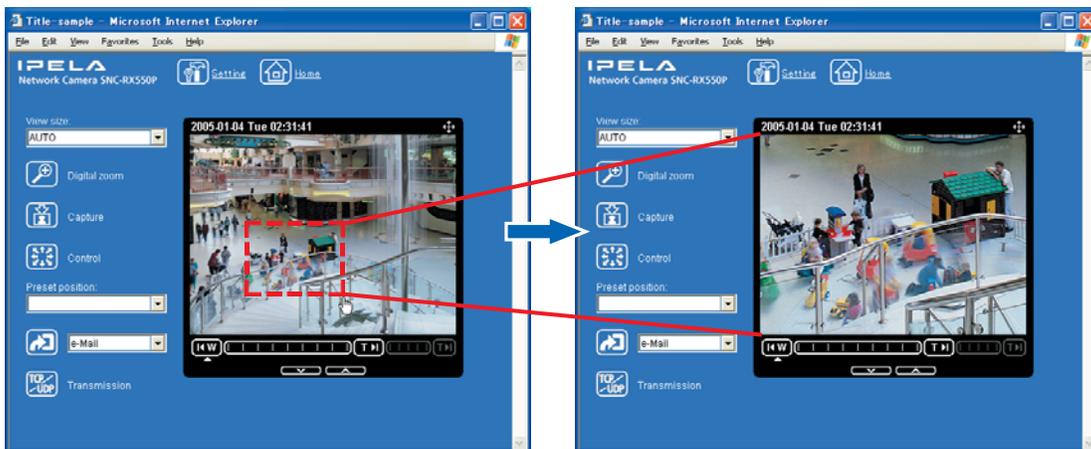
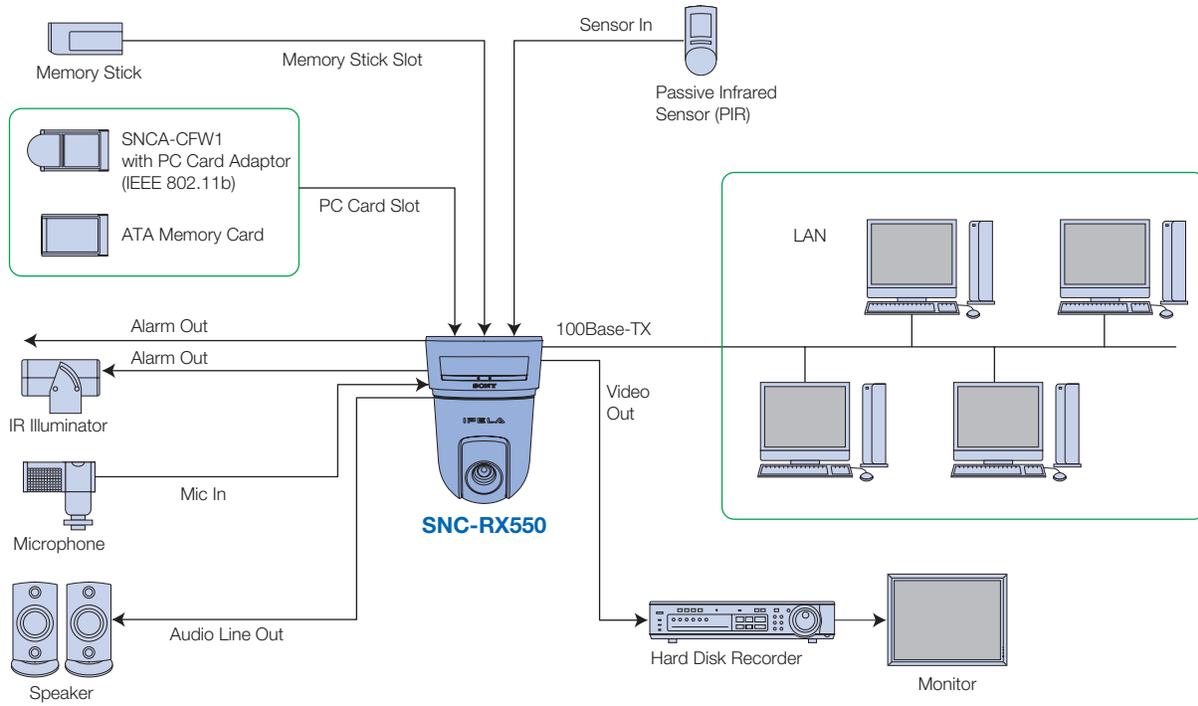


Fig. 4
Intuitive GUI Operation

(simulated images)

SYSTEM CONFIGURATION



REAR PANEL LAYOUT



OPTIONAL ACCESSORIES



SNCA-CFW1
Wireless LAN Card



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



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



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

SPECIFICATIONS

	SNC-RX550N/B	SNC-RX550N/W
Camera		
Image device	1/4-type Exwave HAD CCD	
Number of effective pixels	380,000 (768 x 494)	380,000 (768 x 494)
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 auto, ATW/Manual	
Lens type	Auto-focus zoom lens	
Zoom ratio	26x optical zoom (312x with digital zoom)	
Horizontal viewing angle	2.2 to 54.2 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	360 degrees endless rotation	
Pan speed	300 degrees/s (max.)	
Tilt angle	-90 to 0 degrees	
Tilt speed	300 degrees/s (max.)	
Other functions	Day/Night, Intelligent Motion Detection, Intelligent Object Detection, Anti-tampering, Image stabilizer, 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)	30 fps (640 x 480)
H.264	10 fps (640 x 480)	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, Memory Stick x1	
Analog video output	BNC x1, 1.0 Vp-p, 75 Ω	
External microphone input	Mini-jack (monaural), 2.2 KΩ 2.5 V plug-in power)	
Audio line output	Mini-jack (monaural), max output level: 1 Vrms	
Analog video output		
Signal system	NTSC (Composite)	NTSC (Composite)
Horizontal resolution	470 TV lines	470 TV lines
S/N ratio	50 dB	
Min. illumination	Color: 1 lx (50IRE, F1.6, AGC ON), B/W: 0.15 lx (50IRE, F1.6, AGC ON)	
General		
Weight	4 lb 13 oz (2.2 kg)	
Dimensions (W x H x D)	6 3/8 x 6 3/8 x 9 1/8 inches (160 x 160 x 230 mm)	
Body color	Black	White
Power requirements	AC 24 V/DC 12 V	
Power consumption	25 W max.	
Operating temperature	32 °F to 122 °F (0 °C to 50 °C)	
Storage temperature	-4 °F to 140 °F (-20 °C to 60 °C)	
Supplied accessories		
	Ceiling-mount bracket (A), Ceiling-mount bracket (B), Screws x6, Wire rope, CD-ROM (setup software), Operation manual, Installation manual	
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.5.5 or 6.0	

*H.264 will be supported at a later date via a firmware upgrade.

SONY®

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