SONY ®

Network Cameras

SNC-RX550N
SNC-RX550P

Connect Your Vision

IPELA

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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**" lets 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	Intelligence	Usability
• High Frame Rate (30 fps) • High Sensitivity (Minimum illumination 1.0 lx)	• Advanced Video Motion Detection • Unattended Object Detection • Anti-tampering Function	• JPEG, MPEG-4, H.264 Compression Formats • Dual Encoding Capability • User-Friendly GUI
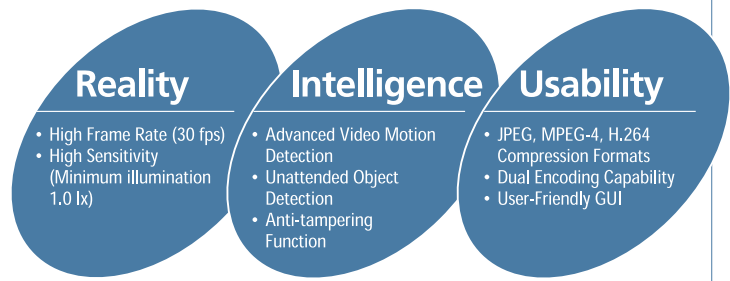
Real audiovisual communication over networks – this is business communication of the future, this is business communication brought to you today, this is "**IPELA**."

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[*1] 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.*

*This camera can freely and endlessly rotate 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[*2] lighting conditions. And using advanced image processing technology, the camera provides three compression formats; JPEG, MPEG-4, and H.264[*3], so that users can choose the appropriate compression format to match the network environment and monitoring applications. The SNC-RX550 also includes a newly developed "Dual Encoding Capability" to allow simultaneous streaming in JPEG and MPEG-4, further expanding monitoring applications.*

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

[*1] The SNC-RX550 refer to both the SNC-RX550N (NTSC model) and the SNC-RX550P (PAL model).
[*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.
[*3] H.264 compressed video cannot be viewed using a browser. This function will be available with a software upgrade in the future.

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*4 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.

*4 H.264 compressed video cannot be viewed using a browser. This function will be available with a software upgrade in the future.

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.

360° Endless rotation

90° Tilt

Fig. 1
Pan/Tilt Range

Fig. 2
26x Optical Zoom (simulated images)

Dual Encoding 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 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[*5] conditions.

[*5] 0 lx means absence of visible light to the naked eye.

Anti-tampering Function[*6]

Incorporating a digital signature technology using Public Key Infrastructure (PKI), the SNC-RX550 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 only to that camera.

[*6] 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.
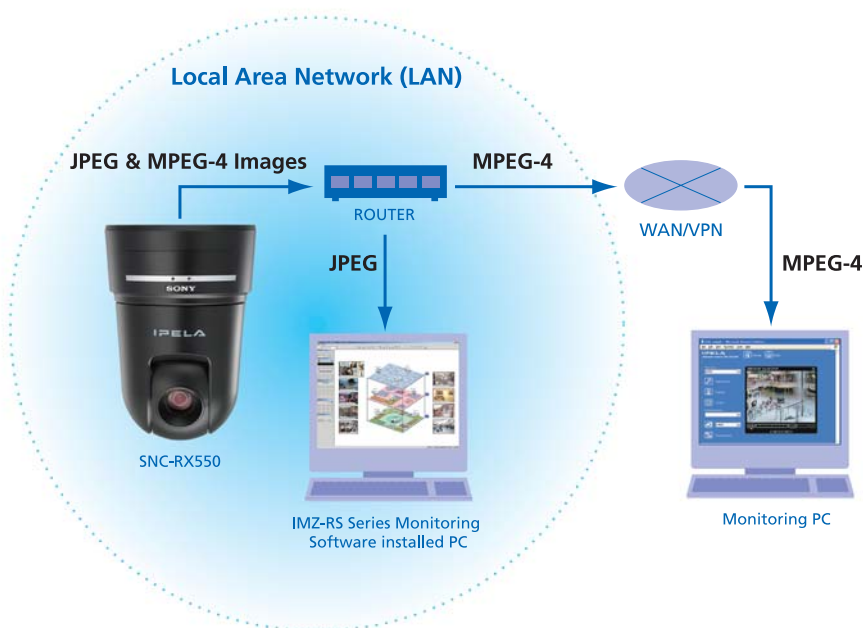

Fig. 3
Dual Image Encoding

Alarm Functions

Advanced Video Motion Detection

The SNC-RX550 is equipped with a built-in advanced video 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 with conventional motion detection, 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.

Unattended Object Detection[7]

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, or for detecting stalled cars or accidents on the road.

[7] The unattended 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[8]

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.

[8] 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. 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.

Memory Stick Slot
PC Card Slot
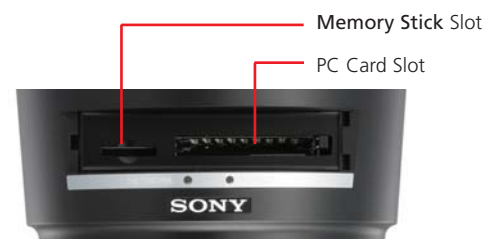
Wireless Capability

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 a speaker output, enabling users to send an alert or make an announcement, significantly expanding the possibilities for remote monitoring applications. With a Voice Alert function, you can play back an audio file using an alarm trigger or the scheduling function.

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.

Analog Composite Video Output

The SNC-RX550 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-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.
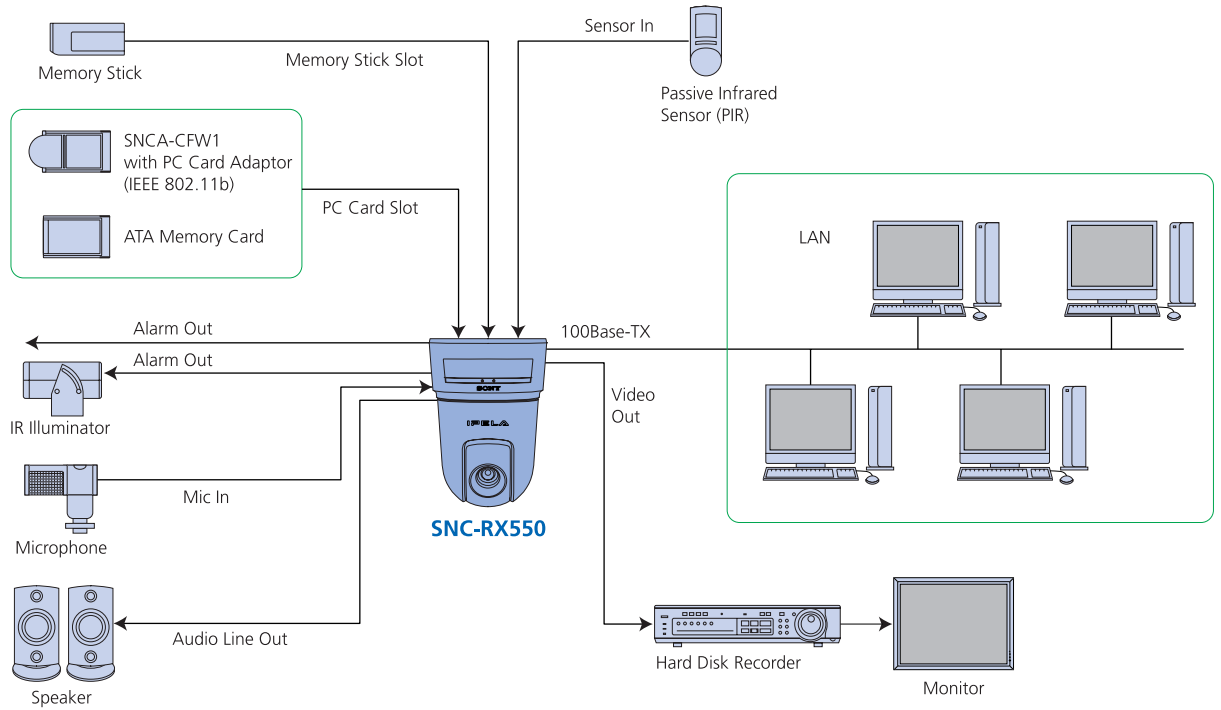This configuration allows for local control of Pan/Tilt/Zoom and for camera settings.

Fig. 4
Intuitive GUI Operation   (simulated images)

SYSTEM CONFIGURATION

Memory Stick

Memory Stick Slot

SNCA-CFW1
with PC Card Adaptor
(IEEE 802.11b)

ATA Memory Card

PC Card Slot

Sensor In

Passive Infrared
Sensor (PIR)

LAN

Alarm Out

Alarm Out

IR Illuminator

100Base-TX

Video
Out

Mic In

Microphone

SNC-RX550

Audio Line Out

Speaker

Hard Disk Recorder

Monitor

REAR PANEL LAYOUT

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

SPECIFICATIONS

	SNC-RX550N/B	SNC-RX550P/B	SNC-RX550N/W	SNC-RX550P/W
Camera				
Image device	1/4-type Exwave HAD CCD			
Number of effective pixels	380,000 (768 x 494)	440,000 (752 x 582)	380,000 (768 x 494)	440,000 (752 x 582)
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) *Vignetting may occur at wide viewing angles under low light conditions.			
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, Advanced Video Motion Detection, Unattended 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)	25 fps (640 x 480)	30 fps (640 x 480)	25 fps (640 x 480)
H.264	10 fps (640 x 480)	8 fps (640 x 480)	10 fps (640 x 480)	8 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)	PAL (Composite)	NTSC (Composite)	PAL (Composite)
Horizontal resolution	470 TV lines	460 TV lines	470 TV lines	460 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				
Mass	2.2 kg (4 lb 13 oz)			
Dimensions (W x H x D)	160 x 160 x 230 mm (6 ^{3}/$_8$ x 6 ^{3}/$_8$ x 9 ^{1}/$_8$ inches)			
Body color	Black		White	
Power requirements	AC 24 V/DC 12 V			
Power consumption	25 W max.			
Operating temperature	0 °C to 50 °C (32 °F to 122 °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, 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			

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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