

NSR Series

Network Surveillance Recorders

SONY

IPELA
INTEGRATED VISUAL COMMUNICATION



THE NEW WAY OF BUSINESS™

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 lets you share ideas and dreams as if you are collocated when your counterpart is half-way around the world, experiencing images as if you are actually there.

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

Reality

- High Frame Rate
- Audio Monitoring/Recording

Intelligence

- Intelligent Motion Detection
- Intelligent Setup

Usability

- Intuitive Remote Control Unit
- User-Friendly GUI
- Quick Search/Playback

For Powerful and Flexible Recording, Sony Network Surveillance Recorders are the Answer

*Introducing the Sony Network Surveillance Recorder (NSR) Series^{*1}- flexible and innovative recording solutions for your security applications.*

These powerful network surveillance recorders are the ideal solution for multi-camera monitoring, recording, and playback. The NSR Series can be used in either a stand-alone system or a client/server configuration, providing flexibility from small- to large-scale operations. The NSR Series is perfect for a broad range of security applications, in locations such as banks, retail outlets, transportation centers, offices, and much more.

These network surveillance recorders offer a wide array of features, including a flexible recording and playback capability, an optional intuitive remote control unit, a user-friendly GUI (Graphical User Interface), Intelligent Motion Detection, Pan/Tilt/Zoom (PTZ) camera control, and much more.

*In addition to its sophisticated monitoring functions, the NSR Series network surveillance recorders can support a large number and wide variety of cameras^{*2}. The NSR-100 can support up to 64 IP cameras^{*3}, the NSR-50 up to 32^{*3}, and the NSR-25 up to 20^{*3}, offering great flexibility and scalability when these units are configured in a security monitoring system. With a broad spectrum of invaluable features – including intelligent setup features, quick access to recorded images – as well as system scalability, the NSR Series is the ideal network surveillance recorder for your IP security monitoring operations.*

^{*1} In this text, the NSR Series refers to the NSR-100, NSR-50, and NSR-25 unless otherwise indicated.

^{*2} Sony network cameras

^{*3} Normal time lapse recording.

FEATURES

High-Quality Image Recording and Playback

The NSR Series supports a high frame rate, allowing high-quality images to be recorded and played back.

NSR-Series Recording Frame Rate^{*3}

NSR-100	480 fps (16 cameras x 30 fps) VGA
NSR-50	240 fps (8 cameras x 30 fps) VGA
NSR-25	120 fps (4 cameras x 30 fps) VGA

^{*3} Recording frame rates shown in the table represents the total frame rate per recorder unit when recording images at JPEG, Level 5 using the SNC-RZ30, and without live image monitoring.

MPEG-4/JPEG Support

With recording and playback support for cameras that encode in both MPEG-4 and JPEG, the NSR Series provides you with more options when configuring your network monitoring system.

Large-Capacity HDDs and High Reliability

The NSR Series employs large-capacity Hard Disk Drives (HDDs) that enable them to record an extraordinary amount of image data.

NSR-100	1000 GB
NSR-50	500 GB
NSR-25	250 GB ^{*4}

^{*4} Recording capacity can be expanded up to 500 GB using an optional NSBK-HD250 HDD Kit.

In addition, the NSR Series adopts a Disk on Module (DOM) mechanism that offers quick and easy recovery in the event that HDDs are corrupted.

RAID Drives

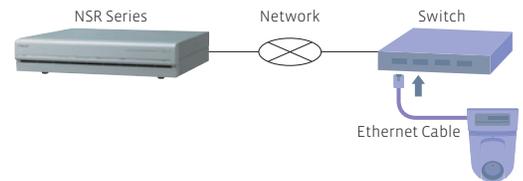
The NSR-100 and NSR-50 employ RAID drives, making these systems more reliable in the event of an HDD failure.

	RAID 5	SPAN	RAID 1	RAID 0
NSR-100	700 GB (Default)	N/A	460 GB	940 GB
NSR-50	N/A	460 GB (Default)	210 GB	N/A

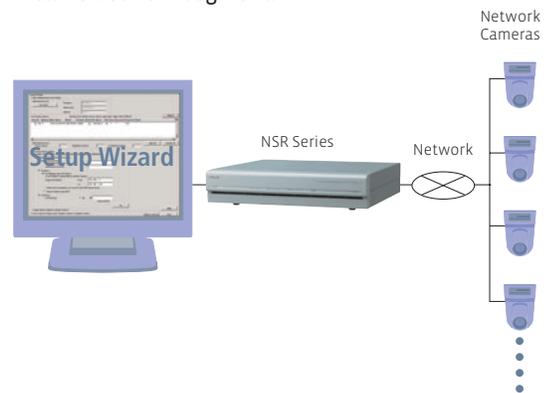
Intelligent Setup

The NSR Series can be easily configured when installing your monitoring system.

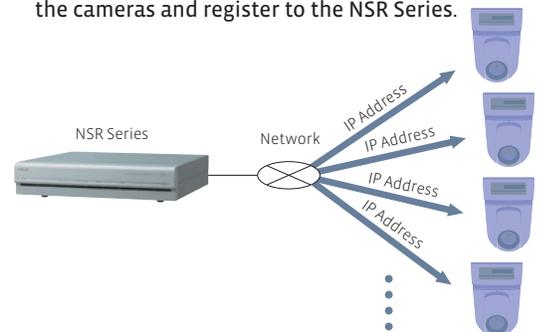
1. Connect an IP camera to a hub or switch on a network using an Ethernet[®] cable.



2. Run the Setup Wizard, and the recorder will automatically recognize cameras installed on the same network segment.



3. IP address assignment and camera registration automatically assign a range of IP addresses to the cameras and register to the NSR Series.



4. An appropriate (default) monitoring layout is automatically generated based on the number of registered cameras.



User-Friendly Operation

Easy-to-Use GUI

The NSR Series features an intuitive and user-friendly GUI that allows you to set up viewer windows in a number of combinations, from a single viewer window to an 8 x 8 matrix. (See *Fig 1*) These layouts can be further tailored to meet your needs: windows can be resized and a "Hot Spot" can be defined. The NSR Series also features dual-RGB outputs, allowing you to configure a system with dual monitors. This is ideal to view larger images, multiple viewer window variations, or assigning the "Hot Spot" to the second monitor. (See *Fig 2*)

Fig 1 Standard Monitor



4 split screen

64 split screen

Fig 2 Dual Monitor



Hot Spot image



RM-NS10 Remote Control Unit

Ergonomically Designed Remote Control Unit

An optional RM-NS10 Remote Control Unit, connected to the recorder with a single USB cable, allows users to control both the recorder and the networked cameras. A wide range of operations, including camera Pan/Tilt/Zoom (PTZ) control, image search, image playback, and camera selection, can be performed from this unit. Also, because the RM-NS10 is equipped with a joystick and a feature-rich control panel, it can be operated intuitively by users familiar with CCTV remote controllers.

Flexible Recording and Playback

Manual Recording

When manual recording is selected in the NSR series, authorized users can initiate a recording at any time from any selected camera. Images from that camera are then recorded at the user-defined refresh rate, resolution, and picture quality.

Scheduled Recording

Schedule recording mode allows users to schedule their recording requirements for any selected camera or group of cameras. There is virtually no limit to the number of scheduling combinations that can be selected. Simply adjust the refresh rate, resolution, and picture quality to record the detail you want, when you want.

Alarm and Pre-Alarm Recording

The NSR Series supports alarm and pre-alarm recording, which is used to record additional detail when an alarm is triggered. Alarms can be triggered by a number of sensors, including internal and external sensors, or video motion detection sensors built in to the networked cameras.

Playback During Recording

Recording and playback can be performed by the NSR Series simultaneously, allowing previously recorded images to be viewed even as recording continues.

Quick and Flexible Search Functions

The NSR Series features multiple methods for searching video, allowing you to quickly locate and review images.

Quick Search:

NSR Series users can quickly locate images recorded from a specific camera by selecting the monitoring window that corresponds to that camera and then designating the date and time to search. Multiple monitoring windows can be selected so that users can search images from multiple cameras. (Fig 3)

Recording List Search:

Users can search recently recorded images from a recording list shown on the right-hand side of the GUI in the NSR Series. (Fig 4)

Advanced Search:

Users can locate recorded images by designating NSR Series cameras, date, time, and recording type. This feature is ideal for advanced searches of any image that has been previously recorded.

Search Functions



Fig 3 Quick Search

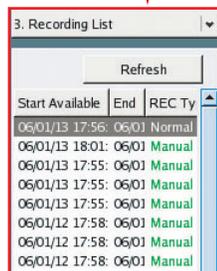


Fig 4 Recording List Search

Analog Camera Support (Optional SNT-V704)

The NSR Series can be used to monitor and record analog camera images via an optional SNT-V704 Video Network Station. This configuration also allows users to control camera PTZ functions directly from the NSR Series. See the SNT-V704 specs for details.

Camera Pan/Tilt/Zoom (PTZ) Control

Sony Pan/Tilt/Zoom network cameras can be remotely controlled over a network using the NSR Series. When a point in the image is clicked, the camera automatically pans and/or tilts to make that point the center of the image. And by dragging out a specified area of the image, the camera will zoom into that area.



Pan/Tilt Control



Zoom Control

Three Gigabit-Ethernet

To avoid network congestion on larger installations, the NRS-50 and the NSR-100 are equipped with three (3) 1000BASE-T ports. Cameras can be connected to the first port while client's PC's can be connected to the second port, and additional storage devices like Network Attached Servers (NAS) can be connected to the third port.

Note: NSR-25 has one (1) Gig E port.

Remote Operation

With a PC running the supplied RSM Controller software, the NSR Series can be controlled from a remote location. Basic operations such as live image monitoring, recording, playback, and image search can be performed. AVI files can be exported using this software. What's more, it also enables control of multiple recorders – up to 100 in total.

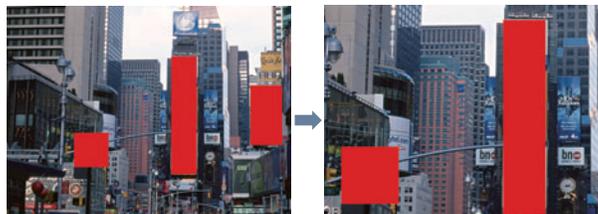
Other Convenient Features

Audio Function

The NSR Series is capable of recording, monitoring, and playing back G.711/G.726 audio. When configured with Sony microphone-equipped network cameras, the NSR Series can accept and process incoming audio.

Privacy Masking Function

With the Privacy Masking function of the NSR Series, unwanted or private areas within an image can be masked as required. When zoom is engaged, the size of the masked areas will adjust in proportion to the zoom position.



Dynamic Masking Function

Compatibility with External Storage Systems

For additional storage capacity, the NSR Series is designed so that it can be configured with NAS (Network Attached Storage) systems.

User Privileges

Sophisticated security functions are incorporated into the NSR Series software to help manage multiple users. The administrator can define user groups, add users, set privileges per user/group, and set up user access to specific camera groups.

File Export to CD-R/DVD-R/Compact Flash™ (CF) Card*⁵

Equipped with a built-in CD-R/DVD-R drives and CF card slot, the NSR Series allows users to export the images for later playback on a PC running the File Player Application Software.*⁶

*⁵ An audio file cannot be exported. The NSR-25 support CD-R drive only.

*⁶ The File Player Application is free software available from Sony Corporation.

Hot-Swap Capability

The NSR-100 supports HDD hot swapping*⁷, which allows for the replacement of a failed drive without powering off the unit.

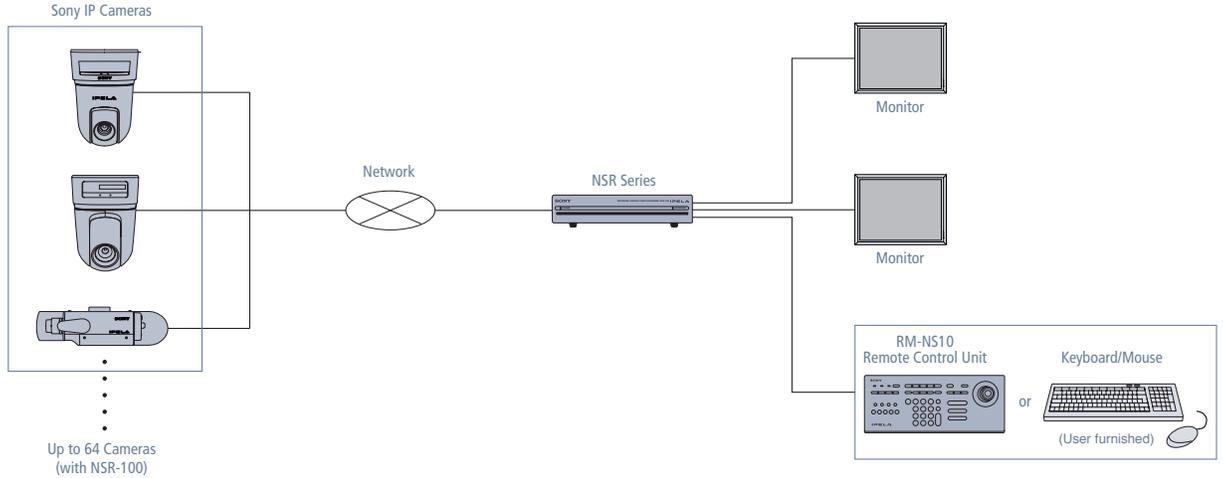
*⁷ HDDs can be hot swapped when the unit is set to RAID 5 or RAID 1.

UPS Support

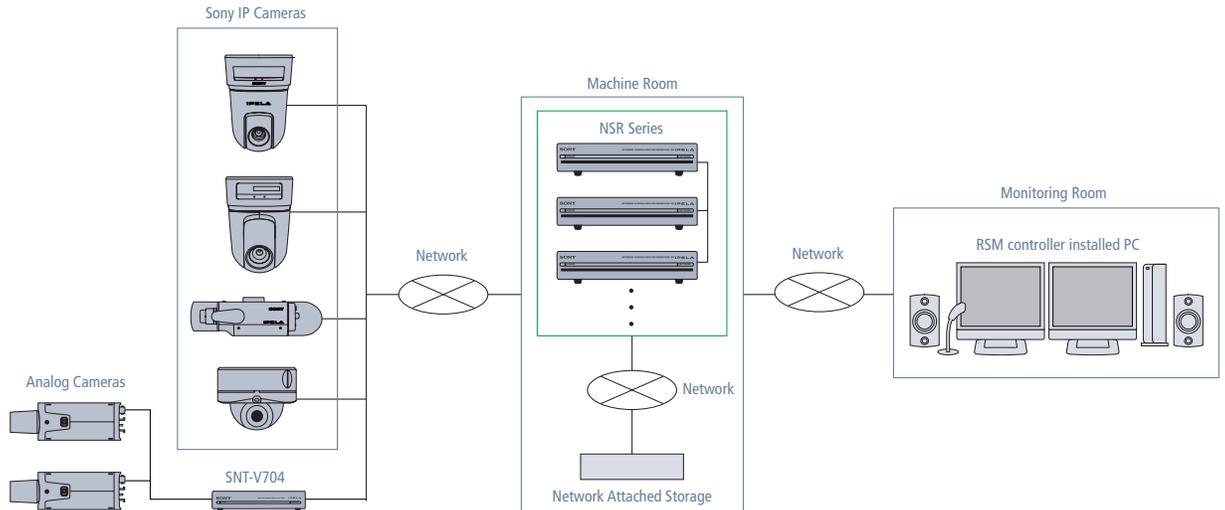
The NSR series can be connected to an Uninterruptible Power Supply (UPS) via the RS-232C interface. This configuration can help prevent data corruption and system shutdown in the event of a power outage.

SYSTEM CONFIGURATION

Stand Alone Configuration



Client-Server Configuration



OPTIONAL ACCESSORIES



RM-NS10 Remote Control Unit
 Dimensions (WxHxD): 387 x 121 x 165 mm
 (15 3/4 x 4 7/8 x 6 1/2 inches)
 Mass: 860 g (1 lb 14 oz)



NSR-RM1 Rack Mount Kit



NSBK-250 HDD Expansion Unit
 (for NSR-25)



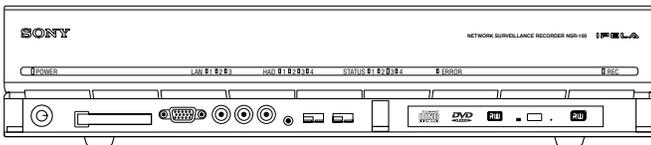
SNT-V704 Video Network Station
 Dimensions (WxHxD): 8 3/8 x 1 11/16 x 8 inches
 (210 x 42 x 202 mm)
 WEIGHT: 2 lb 10 oz (1.2 kg)

SPECIFICATIONS

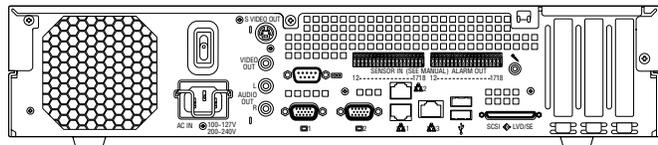
	NSR-100	NSR-50	NSR-25			
Video/Recording						
Number of IP Cameras Supported	64 Max.	32 Max.	20 Max			
Video Compression	MPEG-4 or JPEG					
Maximum Recording Rate ^{*1}	480 fps	240 fps	120 fps			
Hard Disk Drives	Physical Capacity	1,000 GB (250 GB x 4)	500 GB (250 G x 2)			
	Interface	Serial ATA	—			
	RAID Level/Recording Capacity (approx.)	Hardware RAID (Hot Swappable when set to RAID 5 or RAID 1)	Software RAID	—		
	RAID 5 (Default) 700 GB	RAID 1 460 GB	RAID 0 940 GB	SPAN (Default) 460 GB	RAID 1 210 GB	
Network File System (for NAS)	Supports NFS Version 3 protocol					
Video Interface						
Monitor OUT	#1	RGB connector x2 (Front and Rear Panel, cannot be used simultaneously)				
	#2	RGB connector x1				
Video Output	S-Video x1		—			
Analog Composite OUT	RCA-pin x2 (Front and Rear Panel, cannot be used simultaneously)		—			
Audio Interface						
Mic IN	Mini jack x1(front), x 1(rear)		Mini jack x 1(rear)			
Line OUT	RCA-pin, L/R x1 stereo pair, (front and rear panel)		RCA-pin, L/R x1 stereo pair (rear)			
Sensor/Alarm						
Sensor in	8-channel photo-coupler (DC3.3-24V)					
Alarm out	8-channel relay (Max. 24V 1A)					
Other Interfaces						
Ethernet	1000Base-T/100Base-TX/10Base-T x3 (automatic switching)		1000Base-T/100Base-TX/10Base-T x1			
USB	Front x2, Rear x2		Rear x 2			
Serial interface	RS-232C x1 (for UPS) ^{*2}					
General						
Dimensions (W x H x D)	17 x 3 1/2 x 16 1/2 Inches (430 x 87 x 417 mm) excluding protrusions					
Weight	Approx. 28 lb 11 oz (13 kg)	Approx. 26 lb 7 oz (12 kg)	24 lb 4 oz (11 kg)			
Voltage	100 to 127/200 to 240 V AC					
Current consumption	2.77 A / 1.39 A	1.93 A / 0.99 A	1.6 A/0.9 A			
Operating temperature	41 to 104° F (5 to 40° C)					
Operating humidity	10 to 80% (inon-condensing)					
Supplied accessories	Front panel key, Installation guide, Remote control unit operation card, Recovery CD, Manual/Tool/ Source codes CD, Rubber feet (4)					

^{*1} Recording frame rates shown in the table represents the total frame rate per recorder unit when recording images at JPEG, Level 5 using the SNC-RZ30, and without live image monitoring.
^{*2} Please contact your local Sony sales office for a list of recommended UPS systems.

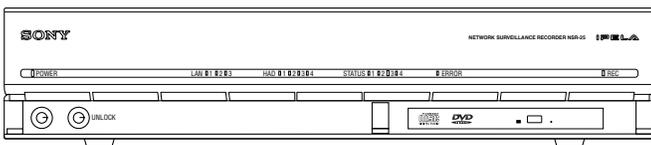
PANEL LAYOUT



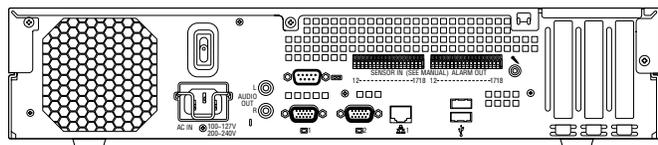
NSR-100/NSR-50 Front panel (Panel open)



NSR-100/NSR-50 Rear panel



NSR-25 Front panel (Panel open)



NSR-25 Rear panel

SONY

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