

Intelligent Monitoring Software

IMZ-NS101

IMZ-NS104

IMZ-NS109

IMZ-NS116

IMZ-NS132

IPELA

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.

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

IMZ-NS100 Series

Reality

- High Frame Rate
- Dynamic Frame Integration

Intelligence

- Video Motion Filter Alarm
- Video Motion Filter Search
- Intelligent Setup

Usability

- Intuitive System Controller
- User-Friendly GUI
- Quick Search/Playback

Simple, Flexible, and Scalable – HD-ready Intelligent Monitoring Software from Sony

The demand for surveillance systems is growing, and the adoption of IP as a transport mechanism for video is ever increasing. Sony recognized this trend early on, and has been focused on developing products and solutions aligned with it. Now Sony is pleased to announce the introduction of the IMZ-NS100 Series Intelligent Monitoring Software, which can be installed on your own Microsoft® Windows® server to monitor and control 1, 4, 9, 16 or 32 network cameras (IMZ-NS101, IMZ-NS104, IMZ-NS109, IMZ-NS116, and IMZ-NS132, respectively).

The IMZ-NS100 Series is easy to use and free from complicated operation – users find it simple to set up connected cameras and to set frame rates for recording. They can also easily monitor, search, and play back events with intuitive manipulation. A scalable security system can be set up in client/server configuration using more than one server installed with the IMZ-NS100 Series and/or using the NSR-1000 Series Video Network Surveillance Server from Sony (which is perfectly compatible with the IMZ-NS100 Series). This system can be controlled by a common user management interface, which allows the administrator to freely set up the access level of each user.

With the IMZ-NS100 Series, you can start an HD video network surveillance system in the scale and configuration that's ideal for current conditions, and expand this system.



Features

Open Platform

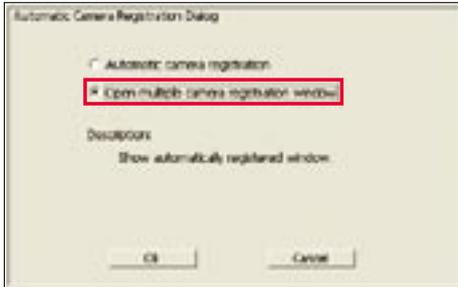
The IMZ-NS100 Series can be used not only with Sony's network cameras but also with other major brand network cameras.

Quick Setup & Easy Operation

Automatic Camera Registration

With the set-up wizard, you can set up the cameras in a simple and straightforward manner. With Sony's IP cameras, for example, the IMZ-NS100 Series instantly recognizes the IP addresses of connected cameras and registers them automatically. You do not need to check the IP addresses or go into multiple menus.

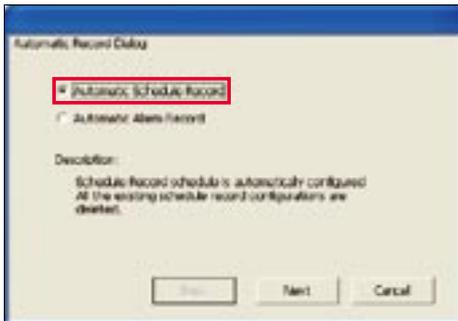
Automatic Camera Registration Dialog



Simple Recording Setup

The settings for recording are also easy. If you select "Automatic Schedule Record", as shown in 1 below for example, you only need to input the recording duration (i.e., the number of days that data is left in the storage area), as shown in 2 below. The IMZ-NS100 Series checks the HDD storage area and sets the best frame rate for recording. You do not need to check the storage area in your PC or calculate the frame rate yourself.

1 Automatic Record Dialog



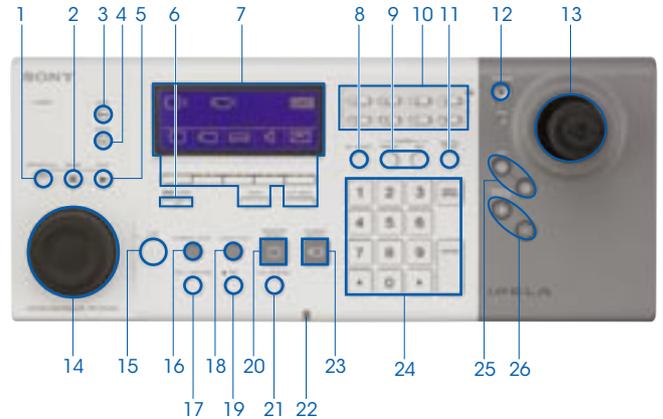
2 Automatic Schedule Record Dialog



Easy-to-use System Controller RM-NS1000

An optional RM-NS1000 System Controller – which connects to a server with the IMZ-NS100 Series installed or a client PC via USB cable – allows the user to control multiple servers and cameras. A wide range of operations can be performed from this unit, including camera selection, and Pan/Tilt/Zoom (PTZ) with preset controls, snapshot capturing, video exporting, and event search and playback.

Equipped with a three-axis joystick with a mouse emulator, three-line LCD, and feature-rich control panel, the RM-NS1000 is the ideal tool for easy operation of your system.



- | | |
|------------------------------|---------------------------|
| 1. JOG/SHUTTLE LED BUTTON | 14. JOG/SHUTTLE DIAL |
| 2. PAUSE | 15. LIVE BUTTON |
| 3. LOCK BUTTON | 16. CAMERA TOUR BUTTON |
| 4. PANIC BUTTON | 17. STILL CAPTURE BUTTON |
| 5. PLAY BUTTON | 18. LAYOUT TOUR BUTTON |
| 6. ALARM BUTTON | 19. MIC BUTTON |
| 7. LCD/MULTI FUNCTION BUTTON | 20. MONITOR SELECT BUTTON |
| 8. ALL SELECT BUTTON | 21. FULL SCREEN BUTTON |
| 9. PRESET/SET BUTTON | 22. BUILT-IN MIC |
| 10. CUSTOM FUNCTION BUTTON | 23. CAMERA SELECT BUTTON |
| 11. DIGITAL ZOOM BUTTON | 24. NUMERIC KEY |
| 12. CURSOR LED BUTTON | 25. IRIS BUTTON |
| 13. JOYSTICK | 26. FOCUS BUTTON |

Shadow Tour Function*

Incorporating a Shadow Tour function, the IMZ-NS100 Series can recall and play back a pre-recorded monitoring path made with SNC-RH/RS Series cameras. Unlike a Preset function, this function allows you to monitor – with correct, smooth motion – at precisely the same angle and speed as previously used. Recordable monitoring motion can be achieved using either a mouse or the optional RM-NS1000 System Controller.

* Available with the SNC-RH/RS Series only.

Monitoring & Quick Search (Intuitive Main GUI)

The Main GUI (Graphical User Interface)



With the user-friendly GUI, you can use various monitoring functions with intuitive operation, such as drag-and-drop. You can also run a quick search, and playback recorded images, while monitoring.

- (1) Camera Pane
- (2) Monitor Frame
- (3) Monitor Control
- (4) Camera Control
- (5) Alarm List
- (6) Playback Control

Drag-and-drop Operation (Camera Switching)

All connected cameras are shown in a tree configuration in the Camera Pane (1). By dragging a camera icon and dropping it onto a Monitor Frame (2), you can easily view live images from a camera.

Easy-to-use Monitoring Functions

Each Monitor Frame (2) shows the status of the video (live or recorded), and the name of the camera, above each video image. Up to 8 x 8 Monitor Frames can be used. By double-clicking a specific Monitor Frame, the display is switched to Single Monitor Frame mode as below.

By Double-clicking a Frame

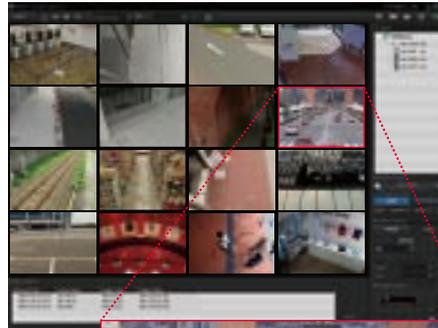


Monitoring & Quick Search (Intuitive Main GUI)

Hot Spot Monitoring/Dual Monitor Support

A specific window in a multi-camera view (i.e., a larger window within the multi-camera window) can be assigned as the Hot Spot area, or a second monitor may be used for this purpose. The Hot Spot area is used to display an image of interest to get a more detailed view – this image can be manually selected or triggered by an alarm.

Monitor 1

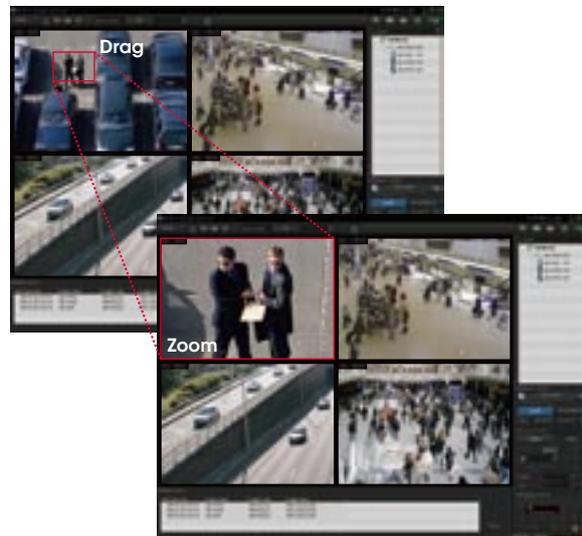


Monitor 2 (Hot spot)

Camera Pan/Tilt/Zoom (PTZ) Control

PTZ network cameras from Sony and other supported brands can be controlled by the Camera Control pane (4). In PTZ Direct Control mode, when a point in the image is clicked, the camera automatically pans and tilts to make that point the center of the image. You can also zoom into the image simply by dragging out the specified area of the image with a mouse.

Zoom



Audio Monitoring

The sound from a microphone connected to the camera can be monitored at the IMZ-NS100 Series.

Quick Search and Playback While Monitoring

If you click PLAYBACK in the Monitor Control pane (3), you can play back the images recorded a certain number of seconds before (this is initially set in the GUI Setting menu). You can also quickly search for the recorded image by date/time search in the Monitor Control pane.

Alarm List Playback

When an alarm recording is executed, the date, time, and the camera name are noted in the Alarm List (5). Simply by double-clicking a line in the alarm list, you can play back the recorded image.

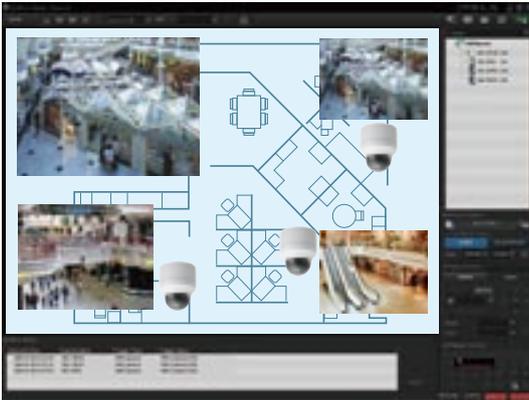
Playback Control and Data Export

With the Playback Control pane (6), you can control the playback functions such as slow and reverse/forward. You can also export the still or moving images of your specified date and time to external media, such as CD-R, DVD-R, and USB Flash Memory.

Customized Layouts

The Layout Editor is a powerful feature that creates customized site layouts and allows the user to insert backgrounds (e.g., a floor plan or campus layout), camera icons, and company logos.

Monitoring GUI (Customized)



Sophisticated Search Functions

Dedicated Search Menu



- (1) Switching Tab (Normal Search/Object Search)
- (2) Search Menu (Search Conditions, VMD, DEPA Setting, etc.)
- (3) Image Control (Zoom, etc.)
- (4) Playback Control (Reverse, Forward, Stop, etc.)
- (5) Display Area (Playback of Searched Images)
- (6) Search Result Area

Two Search Functions

With the Switching Tab (1), you can select either Normal Search or Object Search.

• Normal Search

You can search for specific images by setting search conditions such as the camera name, date, time, and the type of recording (manual/schedule/alarm/event).

• Object Search

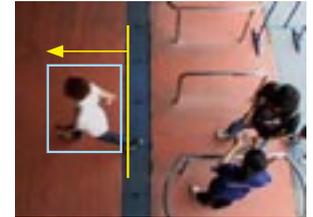
You can search for specific images in the recorded video using intelligent functions. There are two types of search – Post VMD (Video Motion Detection), and VMF (Video Motion Filter). With Post VMD, you can search for images in the recorded video with search conditions that are set after the recording, such as specific object movements. (see below 1) With VMF, you can search for images in the recorded video using DEPA (Distributed Enhanced Processing Architecture) system features. With a VMF search, you should record metadata with DEPA-enabled cameras during the video recording. For example, you can count the number of people who passed a line that is set on the screen. (see below 2)

(Please refer to "What is DEPA?")

1. Post VMD Search



2. VMF Search

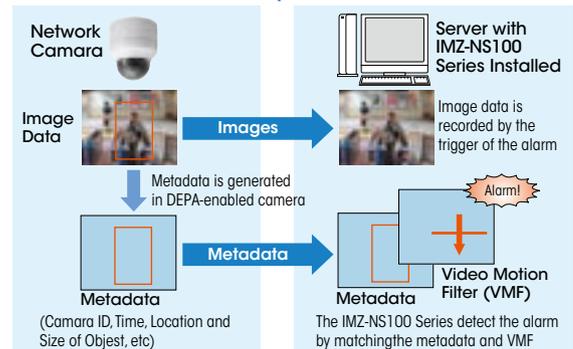


What is DEPA?



In conventional video analytic systems, the camera only sends video images to recorders, and video image analysis is processed solely on the recorder side. In Sony's DEPA system, the DEPA-enabled camera sends to the DEPA-enabled recorder not only video images but also related metadata such as the camera ID, date/time, and information about the shot object (size and position). The recorder checks this metadata with a search filter called a VMF (Video Motion Filter), to send an alarm signal when the metadata matches a preset condition of the VMF. Since the partial image processing is done on the camera side, the system can be configured in a much simpler manner, and can be expanded more easily.

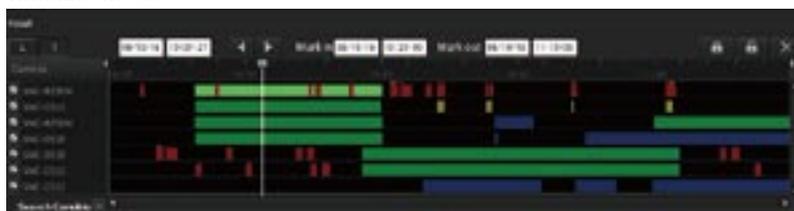
Concept of DEPA



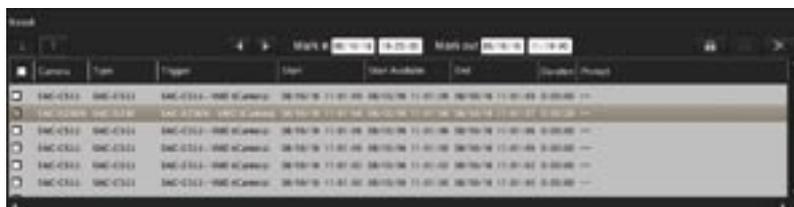
Search Results by Timeline or List

The search result is displayed either by timeline or list (6). In a timeline chart, search results are displayed in different colors depending on the type of recording. You can easily playback video just by clicking on a specific part of the timeline, or on the list.

Timeline Mode



List Mode



Versatile Recording Functions

There are various recording functions:

Manual Recording

Manual Recording is started manually anytime the operator wants.

Schedule Recording

Schedule Recording is started based on a set schedule.

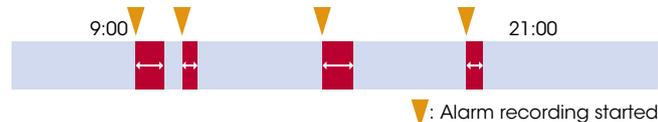
Alarm/Event Recording

There are two types of alarm-triggered recording – Alarm and Event (i.e., Activity) Recording. While it is important to initiate recordings based on video motion detection or alarm signal input, it is also helpful if the user can define what is considered an alarm. For example, a camera may be looking at an area where there are people moving about during office hours, but the recording of such motion should not be considered a true alarm; it is rather a normal event or activity. However, such motion out of office hours should be considered a true alarm, and an action or alert needs to be initiated. The former is performed by Event Recording and the latter by Alarm Recording. The date/time of Alarm Recording is listed in an Alarm List in the main GUI (but this does not occur with Event Recording). Having this capability accomplishes two things – it saves on storage (with motion/alarm recording only), and reduces seek times when searching Alarms and Events.

Schedule Recording with Alarm Marking

While using Schedule Recording, the time when the alarm is detected can be marked in the timeline. This function enables images to be searched quickly.

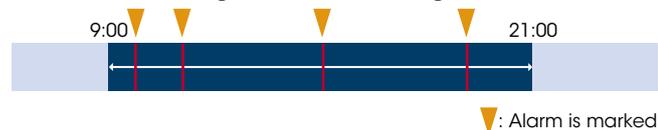
Alarm/Event Recording



Schedule Recording



Schedule Recording with Alarm Marking



Scalability and Flexibility

Scalable to Meet Future Demands

The IMZ-NS101/NS104/NS109/NS116/NS132 can be installed on your own Microsoft Windows server to monitor and control 1/4/9/16/32 network cameras, respectively.

As your surveillance requirements grow, you can simply add new servers with the IMZ-NS100 Series installed and/or the NSR-1000 Series, Sony's video network surveillance server which is perfectly compatible with the IMZ-NS100 Series. You can easily set up a scalable security system in client/server configuration. (Please refer to the System Examples section.)

Flexible User Management Setting

All access to the IMZ-NS100 Series is managed by user authorization, which is set by the system administrator. The administrator can simply provide each user with a permission level selected from the five ready-made levels of operational permission, or set the accessibility in a more customized way. The accessible cameras for each user can be set for each camera, or for each IMZ-NS100 Series. When the system is configured with more than one IMZ-NS100 Series and/or with one or more NSR-1000 Series of network servers, all user information is shared throughout the whole system.

Accepts multiple streams from multi-codec camera

Connected with Sony's network cameras or video encoders, the IMZ-NS100 Series can accept two*1 or three*2 camera streams from each multi-codec camera simultaneously. What's more, connected with the SNC-RH/RS Series and the SNT-EX/EP Series, in any compression combination can be accepted, such as H.264 and H.264 or JPEG and MPEG4 and so on.

The industry-standard JPEG compression formats is the format of choice for high-quality still images. MPEG-4 provides clear moving images efficiently over networks when bandwidth is limited. H.264 provides twice the efficiency of MPEG-4, where bandwidth is even more limited. With a limited storage capacity, for example, you can monitor live video via H.264 at frame rates as high as 30 fps and record video via H.264 at frame rates as low as 5 fps.

*1 SNC-RH164/RH124, SNC-RX570/RX550/RX530, SNC-RZ50, SNC-DF85/DF80/DF50, SNC-DM160/DM110, SNC-CS50/CS20, SNC-CM120, SNT-EX154/EX104/EX101, SNT-EP154/EP104, and later models.

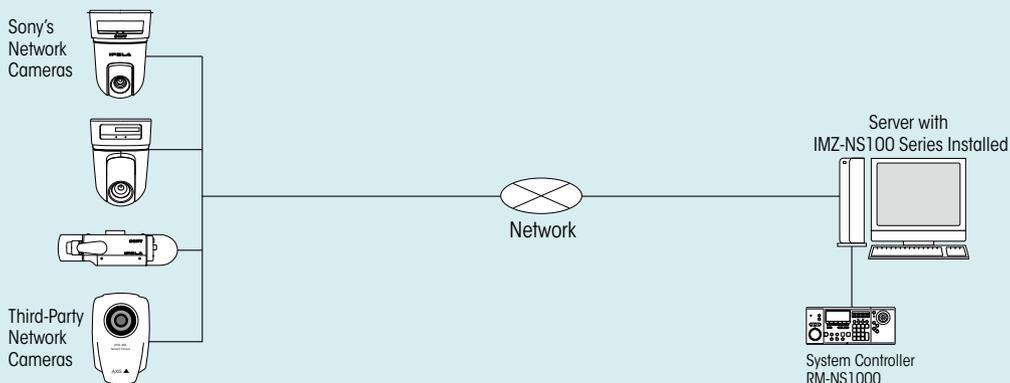
*2 SNC-RS86/RS46/RS84/RS44

Other Key Features

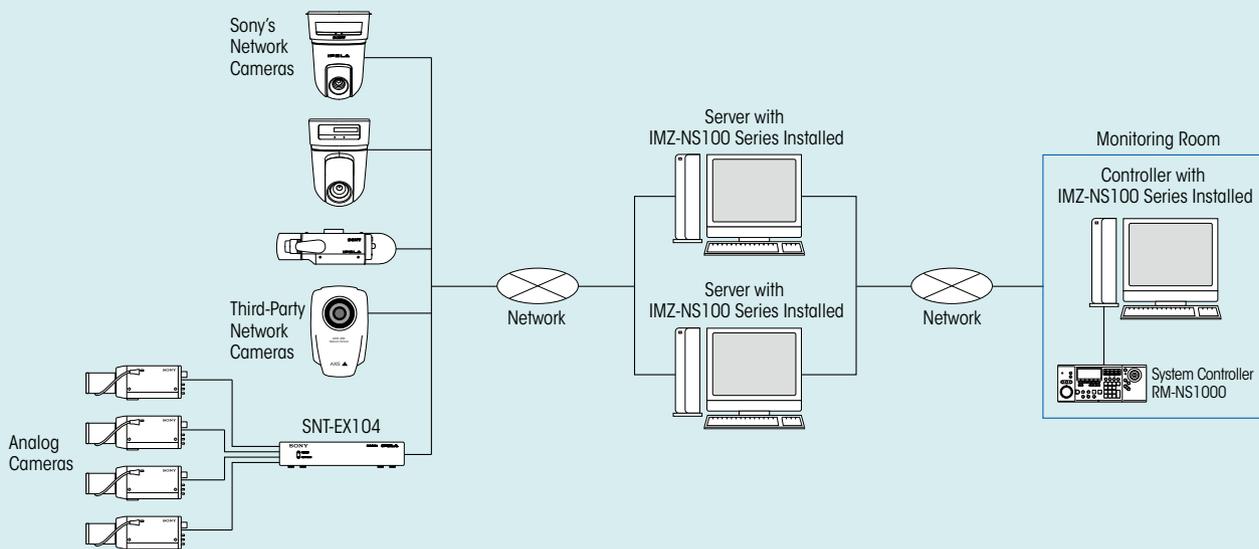
- Tamper Alarm Handling
- Light Funnel Control for Higher Sensitivity

System Examples

Stand Alone Configuration



Client-Server Configuration



Optional Accessory



RM-NS1000
System Controller

IMZ-NS100 Series Software Packages

IMZ-NS101

Control PC software for 1 networked video source

IMZ-NS104

Control PC software for up to 4 networked video sources

IMZ-NS109

Control PC software for up to 9 networked video sources

IMZ-NS116

Control PC software for up to 16 networked video sources

IMZ-NS132

Control PC software for up to 32 networked video sources

System Requirements

Operating system *1	Microsoft® Windows Vista® Business SP2
	Microsoft® Windows Vista® Enterprise SP2
	Microsoft® Windows® XP Professional SP3
	Microsoft® Windows® Server 2003 Standard Edition SP2 Microsoft® Windows® Server 2008 Standard Edition SP2
CPU	Intel® Core™ 2Duo 2.0-GHz or higher
Main memory	1 GB or more
HDD	2 GB spare capacity
Video card	1024 x 768, 16/24 bit color
Network interface card (NIC)	100BASE-TX or higher
Display (Resolution)	1024 x 768 or higher

*1 x 64 edition is not supported.

Specifications

	Server	Client
Video compression	JPEG/MPEG-4/H.264	
Audio compression	G711/G726	
Number of cameras to be connected *2	32	—
Number of clients to be connected *3	10	—
Number of audio to be supported	IMZ-NS101: 1 IMZ-NS104: 4 IMZ-NS109: 9 IMZ-NS116: 16 IMZ-NS132: 32	—
Maximum number of layouts	100	100
Maximum number of users	100	100

*2 This is a recommended value to assure high performance. It is technically possible to connect more than 32 units by installing on the PC a corresponding number of licenses. Display/recording performance basically depends on PC performance, but an increase in cameras may deteriorate overall performance.

*3 This is a recommended value to assure high performance. It is technically possible to connect more than 10 clients, but this increase may deteriorate overall performance.

RM-NS1000	
Interface	
Interface	USB 2.0 low-speed device (Cable Length - Approx 3m; 9ft. 10in.)
	USB 2.0 (2)
External Interface	Microphone stereo mini jack (plug-in power) (1)
	Headphone stereo mini jack (1)
	RS-485 port
General	
Dimensions	409.0 (W) x 111.5 (H) x 170.0 (D) mm (16 1/8 x 4 1/2 x 6 3/4 inches)
Mass	1.200 g (2.6 lb)
Power Requirement	DC 12V
Power Consumption	1A
AC Adapter	100-240V AC, 50/60Hz
Operating Temperature	5 to 40 degrees C (41 to 104 degrees F)
Operating Humidity	20 to 80 % (max. wet bulb temperature : 32 degrees C (90 degrees F))
Supplied Accessories	AC Adapter (1), First Step Guide (1), CD-ROM (User's Guide) (1), Warranty (1)

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