SANYO Network Solutions
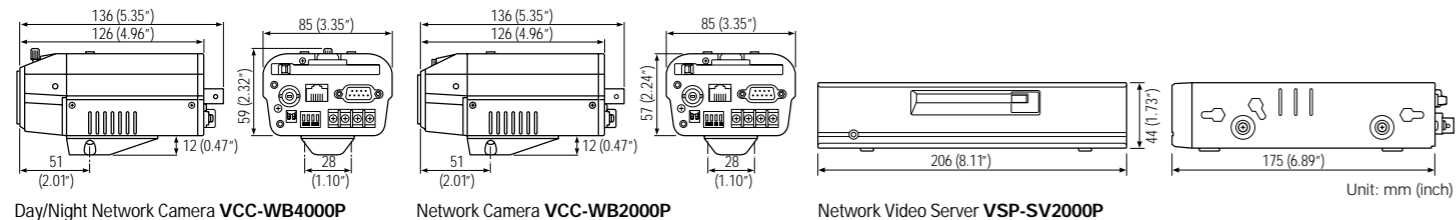
Specifications

Model	Day/Night Network Camera VCC-WB4000P	Network Camera VCC-WB2000P	Network Video Server VSP-SV2000P
Image sensor	1/3" 410,000-pixel CCD, interline transfer method		
Effective pixels	768 (H) x 494 (V)		
Day/Night function	Yes	No	
Minimum object illumination	0.6lx (F1.2, colour), 0.03lx (F1.2, B/W)	1.0lx (F1.2)	
Brightness	5 steps		
Backlight compensation	Off, Multi, Centre		
White balance	Auto, Indoor, Outdoor, Manual		
Gain control	Auto, Off		
Gamma	0.3, 0.45, 0.6, 0.8, 1		
Electronic shutter	1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.		BNC connector x4 NTSC / PAL composite video: input / output
Lens mount	CS mount		
Flange back	12.5 mm ±0.5 mm adjustment		
Electronic iris	On / Off, 1/60 – 1/10000 sec.		
Auto iris	DC drive, 4-pin		
Alarm I/O interface	Alarm in: 1 (NO/NC) Alarm out: 1 (with motion detector)		Alarm in: 4 (NO/NC) Alarm out: 1 (with motion detector)
Resolution	720 x 480, 720 x 240, 640 x 480, 320 x 240, 160 x 120 pixels		
Image compression method	JPEG2000		
Picture quality	5 steps (more than 5 KB)		
Frame rate	Max. 30 fps (640 x 480 pixels)		
Monitor output	1 (composite, PAL)		
Ethernet interface	10BASE-T / 100BASE-TX (RJ45)		
RS-232C	D-sub 9-pin		
PC card slot	PCMCIA Type II (5 V power supply only)		
Pre-/post alarm buffer	16 MB		
Network protocol	TCP/IP, PPP, FTP, HTTP, SMTP, NTP		
Software	Plug-in browser (Internet Explorer compatible)		
Operating environment	Temperature: –10°C to +50°C (+14°F to +122°F), Humidity: within 90% RH		
Power requirement	24V AC / 12 – 15V DC		12V DC
Power consumption	11 W	10 W	5.5 W
Weight (approx.)	480 g (16.9 oz.)	470 g (16.6 oz.)	970 g [34.2oz.]

Operating environment

OS	Microsoft® Windows® 98 / Microsoft® Windows® ME / Microsoft® Windows® 2000 / Microsoft® Windows® XP
CPU	Intel® Pentium® III 800 MHz or higher or similar with equivalent speed capacity (Pentium® 4 2 GHz recommended)
Memory	128 MB or more (256 MB or more recommended)
Browser	Microsoft® Internet Explorer 5.5 SP2 or later
Drive	CD-ROM drive
Network card	10Base-T / 100Base-TX
Protocols	TCP/IP, PPP, FTP, HTTP, SMTP, NTP
Computer monitor	Display size of 1024 x 768 pixels or greater

Specifications

Model	Network Archiving Software VA-SW2000 (Ver. 1.1)		
Number of streams	Up to 16 cameras		
Number of simultaneous log-in users	Up to 16 users		
Recording frame rate	Max. 120 fps (with 4 cameras)		

Recording	Function		
Frame rate	0.1–30 fps (15 steps)		
Recording duration	HDD capacity dependent		
Resolution	720 x 480 / 720 x 240 / 640 x 480 / 320 x 240 / 160 x 120		
Picture quality (compression ratio)	STEP1–STEP5		
Timer recording	Specify time, e.g.: 08:00–12:00/day		
	Specify day, e.g.: Wed., Fri./week		
	Combiantion of above		
Overwriting	Normal recording area, On / Off		
	Alarm recording area, On / Off		

Viewing	Function		
Viewing live images	Display of latest image on server (default mode)		
Select camera	Camera number / Camera title		
Viewing recorded images	Search and view images recorded on server		
Search mode	Time / Date / Alarm		
Playback modes	FF / REW / STILL / Frame Advance (forward / reverse)		
Screen layout	Split screens (1 / 4 / 9 / 16)		

Alarm	Function		
Alarm sensor	Camera capability dependent		
Action when an alarm is detected	No action	Recording	Notification
Alarm recording area	Alarm area setting from 0% to 99%		
Additional alarm recording area	Select between 0 to 300 seconds		
Compression ratio	Time / Picture quality		
Alarm recording resolution	720 x 480 / 720 x 240 / 640 x 480 / 320 x 240 / 160 x 120		
Alarm notification method	E-mail		
Alarm notification locations	5 addresses		

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Note: • Specifications subject to change without notice. • Frame rates variable dependant upon network line conditions and PC performance.
• Because products and software described in this brochure are subject to continuous improvement: SANYO reserves the right to modify product specifications, functions and design without notice.

Dimensions

Day/Night Network Camera **VCC-WB4000P**   Network Camera **VCC-WB2000P**   Network Video Server **VSP-SV2000P**

Unit: mm (inch)

Caution: Please consult the instruction manual to ensure safe and proper operation of the product.

DI Solutions Company of Sanyo Electric Co., Ltd. obtained Quality Management System ISO9001 and Environmental Management System ISO14001 certifications.

Distributed by:

SANYO Network Solutions

DIGITAL

JPEG2000
JPEG2000 Compliant Imaging Technology

NEXUSAGE™

Day/Night Network Camera **VCC-WB4000P**

Network Camera **VCC-WB2000P**

Network Archiving Software **VA-SW2000**

Network Video Server **VSP-SV2000P**

Easily Installed, Highly Functional Network Surveillance Systems Integrated with Existing LAN and Security Systems.

Highly integretable network surveillance systems for high-resolution, high-speed remote access and viewing.

SANYO Network Solutions system products can be seamlessly integrated to meet a wide range of needs, with either existing analogue devices or digital security systems, for remote access and viewing possible over the Internet from practically anywhere in the world.

SANYO Network Solutions cameras and video servers utilise the wavelet technology-based JPEG 2000 standard for better compression, without producing blocking artifacts or mosquito noise, to enable continuous transmission of 640 x 480 pixel resolution images at speeds of up to 30 frames per second.

JPEG2000   JPEG

Note: Comparative images are simulations.

NEXUSAGE Product Lineup

Monitoring via Networks both Day/Night	Monitoring via Networks by High-Definition Colour Camera	Monitoring via Networks with Existing Analogue Devices	Digital Recording of Images via Networks
Day/Night Network Camera **VCC-WB4000P**	Network Camera **VCC-WB2000P**	Network Video Server **VSP-SV2000P**	Network Archiving Software **VA-SW2000** (Ver. 1.1)

Simplified Connectivity Using Existing LAN

Connect either VCC-WB2000P or VCC-WB4000P network cameras to a LAN to enable a SANYO Network Solutions basic system providing easy monitoring.

Network Cameras
VCC-WB4000P
VCC-WB2000P

View Client

Router

INTERNET

Router

Network Video Server
VSP-SV2000P

Digital Video Recorder

View Client

PTZ   Analogue Cameras

Integration with Existing Analogue System

Add the VSP-SV2000P Network Video Server for easy integration with an existing analogue system where up to four analogue devices can be connected to one video server.

View Client

Router

Network Video Server
VSP-SV2000P

Analogue Cameras

PTZ

Router

Network Video Server
VSP-SV2000P

Network Cameras
VCC-WB4000P
VCC-WB2000P

View Client

Data Storage

Local Server   Network Archiving Software **VA-SW2000**
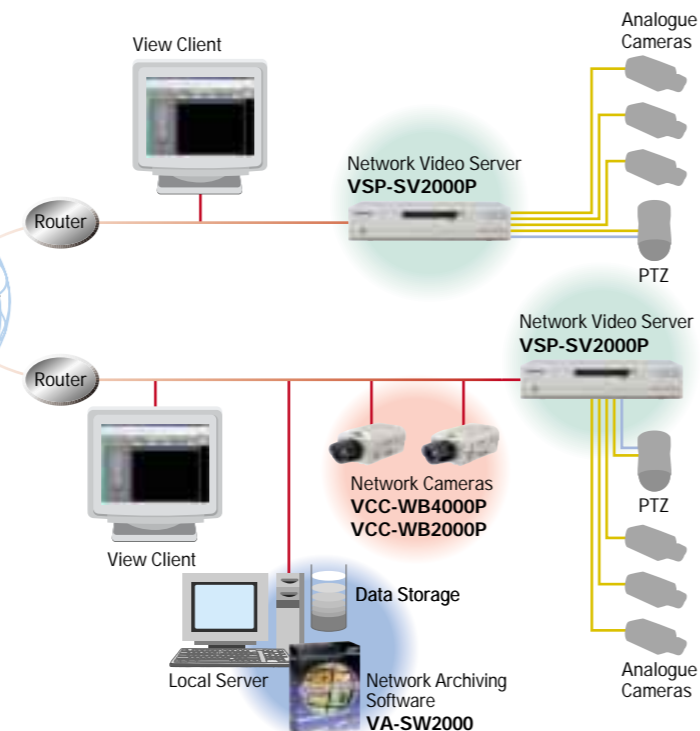
PTZ

Analogue Cameras

System Using SSP Compatible Devices

Network Video Server compatibility with SANYO's Security Serial Protocol (SSP) enables control of SSP compatible devices for a wider array of monitoring and recording options.

Archiving of Camera Image Data

Network Archiving Software provides video storage to hard drive and simultaneous recording and playback of images from up to 16 cameras.

LAN
SSP (RS-485)
Coaxial

Plant facilities

Shopping centres

Monitoring, Recording and Device Control: Integrated Security Solutions for Far-Reaching Functionality

SANYO Network Solutions don't just handle monitoring; they perform a whole range of functions that extend from recording and playback of digital images to the control of security system devices.

Making effective use of existing systems, SANYO Network Solutions hold the promise of 24/7 monitoring and recording capabilities at multiple remote sites for a vast array of applications including schools, research facilities, plant facilities, shopping centres, chain stores, car parks, hospitals, daycare centres, elderly care facilities, and more.

Car parks

Daycare centres

Schools

Note: Screen images are simulated.

Shared Features of Network Video Server and Network Cameras

Easily Connected to LANs via Ethernet Interface

Images are transmitted through a fully functional built-in Web server. This means that as long as a power source can be secured, installation is easy and requires no video cabling because data is transmitted over the Internet or a LAN via an Ethernet interface.

High Quality Images at 30 fps with JPEG 2000 Format

When compressed using the JPEG 2000 format, images the size of 640 x 480 pixels can be transmitted at maximum rate of 30 frames per second.

User-Defined Image Frame Settings

Scalable from a maximum size of 720 x 480 pixels to a minimum of 120 x 160 pixels, resolution, compression ratio and transmission rate parameters of image frames are adjustable in five steps. Images can be enlarged without increasing data volume with the expansion function and further tailored with such functions as colour/ monochrome switching to suit the purposes of the user and the system environment.

Pre-/Post Alarm Images Stored Internally

When an alarm is triggered, video images prior to the event (pre-alarm) and those following the event (post alarm) can be recorded and played back.

Store Monitored Images to PCs

Images captured during monitoring can be saved to a PC as still shots in JPEG2000 file format.

Support for Standard Web Browser

Images monitored at each point can be viewed using Internet Explorer when the JPEG2000 plug-in software bundled with the camera is installed.

Access Rights Restricted via Three-Tier Hierarchy

A maximum of 16 users can access one Network Camera or Video Server at a time. Access is limited by passwords designating three access levels: an administrator with access to all menu settings; operators with limited access to menu settings; and users with monitoring rights only.

Alarm Alerting via E-mail
(New Function)

Notification regarding camera alarm events and images can be sent to pre-set e-mail addresses. Up to a maximum of five addresses can be set for alarm alerting.

Synchronization via NTP
(New Function)

Network Time Protocol (NTP) corrects for time differences between devices when connected to a NTP server.

PCMCIA Slot for Powerful Expandability

The PC card slot enables additional memory capacity or wireless LAN connectivity by simply inserting a wireless LAN card.
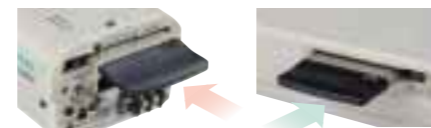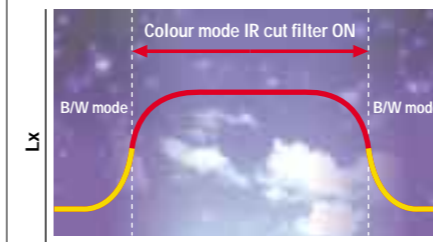
VCC-WB4000P/WB2000P   VSP-SV2000P

For a complete listing of compatible wireless LAN cards visit the website at www.sanyosecurity.com.

Simplified Connectivity Using Existing LAN

Network Cameras
VCC-WB4000P
VCC-WB2000P

View Client

Camera images as seen on Web browser

System Using SSP Compatible Devices

View from Web browser using the Video Server

Network Video Server
VSP-SV2000P

Digital Video Recorder

View Client

SSP compatible devices controlled from Web browser

PTZ   Analogue Cameras

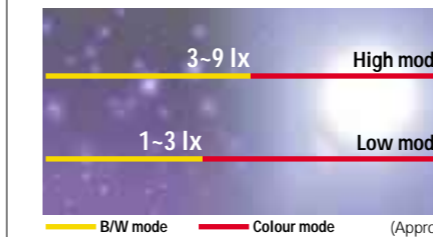# High-Definition Cameras for Demanding Surveillance Applications

Day/Night Operation

The VCC-WB4000P Network Camera provides automatic switching between colour and B/W shooting in response to subject luminance for monitoring both day and night. Shooting modes can also be set for monitoring in colour or B/W only, or set to switch between colour and B/W modes according to a built-in timer.

Proprietary auto-switching infrared cut filter

Colour mode IR cut filter ON

B/W mode   B/W mode

Lx

Time →

Switchover point

3~9 lx   High mode

1~3 lx   Low mode

━━ B/W mode   ━━ Colour mode   (Approx.)

High Functionality Designed for Fail-Proof Security Systems

Designed for the high level of functionality demanded by security applications with features that include a motion-detector function that responds when it senses the movement of objects in the scene, and super sensitivity enabling image capture under lighting conditions as low as 0.03 lux (B/W mode) with the VCC-WB4000P or 1.0 lux with the VCC-WB2000P.

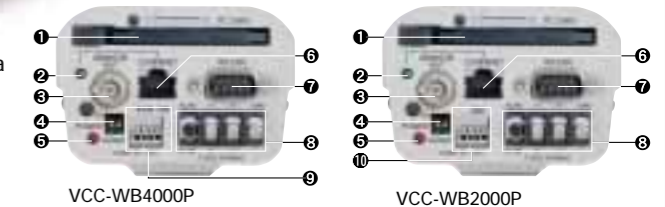Day/Night Network Camera
VCC-WB4000P

Other Camera Features
• 410,000 Pixel CCD • CS Lens Mount
• Two Modes of Backlight Compensation
• Four Types of White Balance (Auto / Indoor / Outdoor / Manual) • Electronic Iris
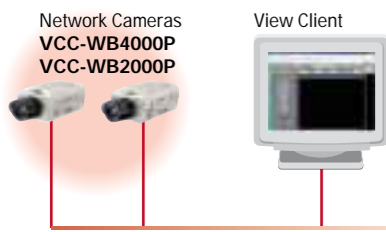• Electronic Shutter

Network Camera
VCC-WB2000P

VCC-WB4000P   VCC-WB2000P

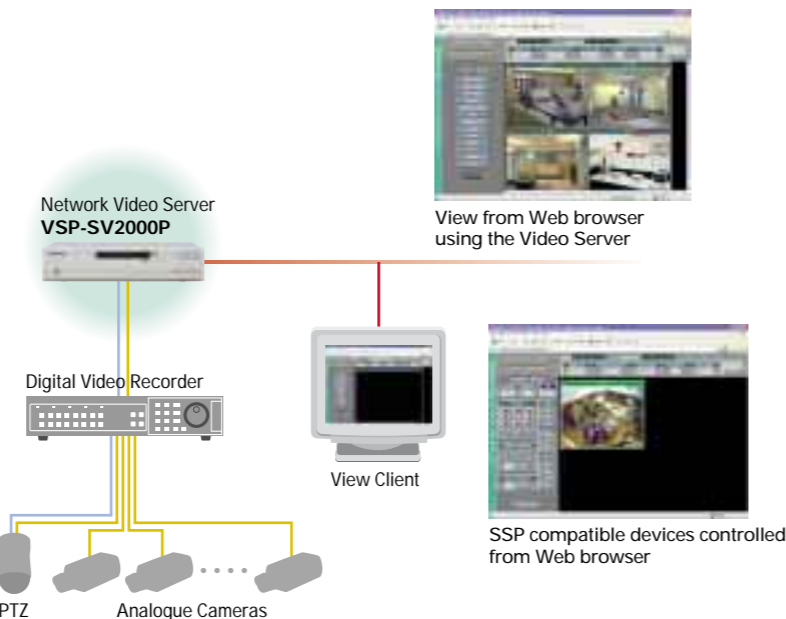**Rear Panel**
❶ PC CARD slot
❷ Link indicator
❸ MONITOR OUT connector
❹ PC / MODEM select switch
❺ POWER indicator
❻ ETHERNET connector
❼ RS-232C connector
❽ Power input terminals (24V AC/12V DC, GND)
❾ ALARM / Day/Night terminals
❿ ALARM terminals

Integratable with Analogue Systems

Network Video Server
VSP-SV2000P

VSP-SV2000P
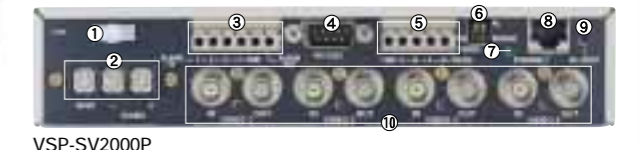
Network Video Server Enables Analogue Devices

The Network Video Server simultaneously performs digital processing of images from up to four analogue devices and transmits data via the Internet or a LAN.

Other Network Video Server Functions
• 4 Channel Input/Output
• Quad Screen Display

SSP Control of System Devices

The Network Server also supports SSP to enable remote control of SPP enabled devices over a network.

Rear Panel
① Power cord holder
② Power input terminals (12V DC, GND)
③ ALARM IN/OUT terminals
④ RS-232C connector
⑤ RS-485 connector
⑥ Communication/ terminal select switches
⑦ Link indicator
⑧ ETHERNET connector
⑨ Reset button
⑩ VIDEO IN/OUT terminals

Note: Screen images are simulated.

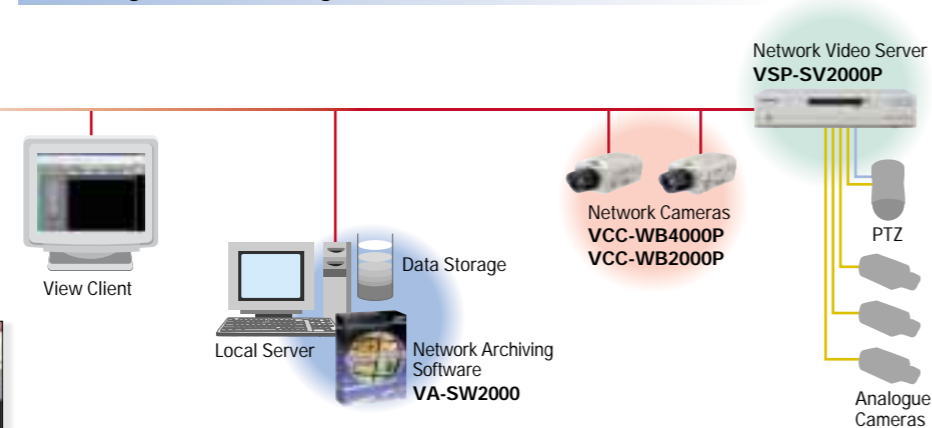# *Easy-to-Use Interfaces to High Performance Features*

VA-SW2000 Network Archiving Software (Ver. 1.1)
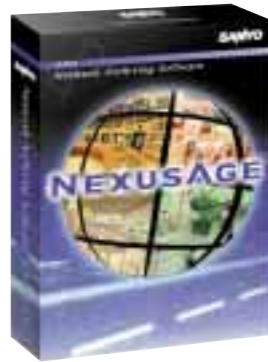
Effortless Recording and Playback of High-Quality Surveillance Images

The high-definition and exacting reproducibility demanded of video applications in the security industry is brought under your control with the VA-SW2000. Designed specifically for security applications, this archiving software allows anyone to easily manage the recording and playback of image data from SANYO Network Cameras and a Network Video Servers linked via a LAN or the Internet. Installation on the hard drive of a networked computer enables it to be used as the local server of a video surveillance system equipped with an array of functions allowing a diverse range of executable operations.

Archiving of Camera Image Data

Network Video Server
VSP-SV2000P

View Client

Data Storage

Network Cameras
VCC-WB4000P
VCC-WB2000P

PTZ

Local Server

Network Archiving
Software
VA-SW2000

Analogue
Cameras

Main window

Full screen window

Simultaneous Recording of Images from Up to 16 Sources

Enabling simultaneous recording of scenes from up to 16 sources, VA-SW2000 displays its considerable powers by allowing detailed analysis of recorded images thanks to the ability to record high-resolution images at 30 fps. (30 fps is the best possible speed with a system connected with 4 cameras.)

Multiple Video Streams from 1, 4, 9 or 16 Cameras

Live and recorded images from one camera displayed full-screen or up to a maximum of 16 camera images displayed simultaneously can be randomly selected and arranged on-screen.

Sequence Display Function
(New for Ver. 1.1)

The order in which images from cameras are displayed can be set for single or multi (4 or 9) screens in sequences of up to 16, 8 and 4 patterns, respectively.

Simultaneous Recording and Playback

Simultaneous recording and playback capabilities enable playback of video images to be monitored from the same point.

Security Provided by Passwords

VA-SW2000 can be simultaneously accessed by up to 16 users. Access by users is restricted by passwords designating two access groups: an administrator with full viewing and configuration control; and users with viewing control only.

User-Friendly Graphic Interface

On-screen functions have all been designed for user-friendliness that extends from image search functions, record and play button operation and all the way through to camera and network settings, and adjustable parameters such as backlight and white balance.
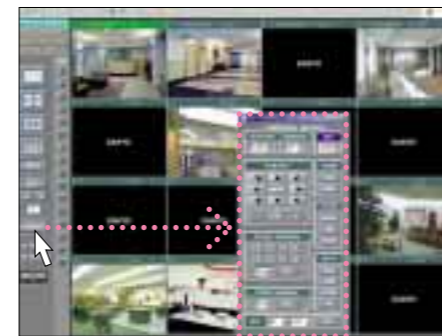
The SSP control button can be removed from the main window and opened separately for greater ease of use.

Alarm Alerting via E-mail

Notification regarding camera alarm events and images can be sent to pre-set e-mail addresses. Up to a maximum of five addresses can be set for alarm alerting.

Alarm-list display screen

Recording Modes

Recording rates and resolutions during normal and alarm recording can be set, and settings for real-time and time-lapse recording can be made at will.

Recording-mode setting screen

Easy Setup (New for Ver. 1.1)

Network Camera and Network Video Server setup and registration, including IP addresses, numbers, IDs and names, is easily managed via the user-friendly graphical interface.

User Property Set Functions
(New for Ver. 1.1)

Enables registration and granting of specific privileges to general users including user IDs and passwords, control of SSP compatible devices, and playback privileges.

User property setting screen

Download and Playback of Recorded Images

Images retrieved using the image search function can be played back and or downloaded and saved for playback from a PC hard drive via the Image Viewer featuring forward/reverse playback and frame advance/reverse controls and selectable resolution and frame rate.

Search screen

Other Functions
• Time / Date Search • Alarm Search
• Timer Recording

Network Archiving Software System Requirements

Software System Requirements	Local Server PC		View Client PC	
	(minimum)	(recommended)	(minimum)	(recommended)
CPU	Pentium® III 800MHz	Pentium® 4 2GHz	Pentium® III 800MHz	Pentium® 4 2GHz
Memory	256MB	512MB	128MB	256MB
OS	Windows® 2000 Server / Windows® 2000 Professional Windows® XP Professional		Windows® 98SE / Windows® Me / Windows® 2000 Windows® XP	
Browser	Internet Explorer 5.5 SP2 or later		Internet Explorer 5.5 SP2 or later	

Note: Whether or not an operating system can be used is dependant on the number of PCs connected to the local server PC. Check your system configuration and Microsoft® licence to ensure that the operating system you choose is in compliance with the conditions stated in the licence.

Note: Screen images are simulated.