SONY®

PAL/CCIR

Surveillance and IP Monitoring Systems

General Catalogue
2003-2004

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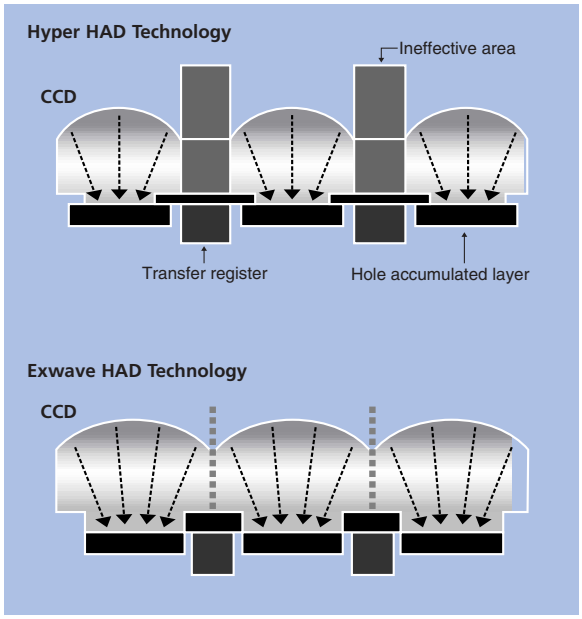
Sony Camera, Monitor and Time-lapse VCR Technologies - The Sony Advantage

Camera Technologies

Exwave HAD™
SSC-DC50AP/DC54AP/DC58AP
SSC-DC393P/DC398P/M383CE/M388CE
SNC-Z20P/CS3P

In monitoring and surveillance applications, camera sensitivity is one of the most important factors in obtaining a clear image in low light conditions.

Exwave Sensitivity



Exwave HAD technology is well over twice that of cameras using the Sony Hyper HAD™ technology. The Hyper HAD sensor structure has an OCL (on chip lens) located over each pixel. This results in light being concentrated on the photosensor areas and the sensitivity of the camera is improved. Exwave HAD technology takes the Hyper HAD technology a giant step further. The OCL of the Exwave HAD is a nearly gapless structure, eliminating the ineffective areas between the microlenses. This enables the hole accumulated layer to receive the maximum amount of light.
In addition, the smear level of the Exwave HAD technology is reduced to 1/50th that of the Hyper HAD technology. This leakage is dramatically reduced because the improvement of the unit cell structure minimizes the unnecessary reflection of the light onto the CCD surface.

Smart Control™
SSC-DC50AP/DC54AP/DC58AP

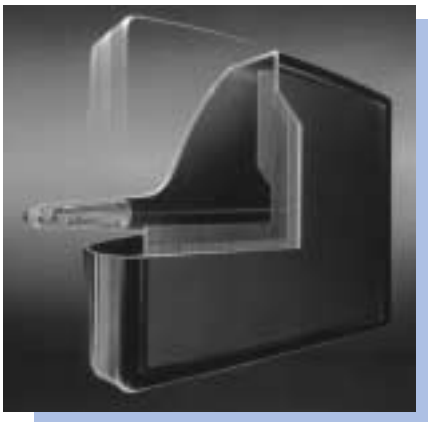
Strong backlighting can often cause the subject of an image to be cast into shadow. To overcome this problem, the Smart Control function achieves the optimum balance between Iris and Gain settings in a unified digital signal processing circuit. As a result, clear colour images can be obtained even under severe or varying lighting conditions. Smart Control also works intelligently as it employs average light metering to detect the position of the major subject, and Fuzzy Logic to calculate the proper exposure.

Backlight Compensation

Monitor Technology

Trinitron® CRT

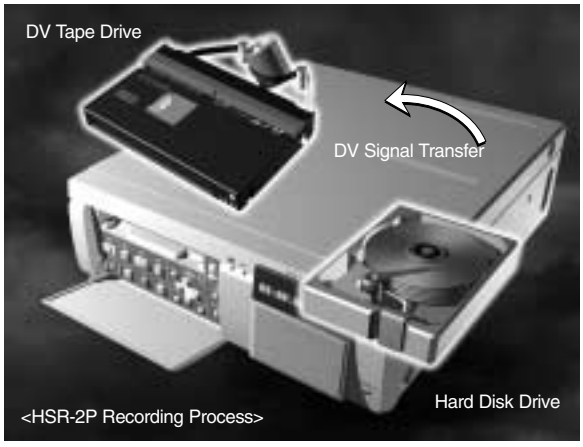
Sony incorporates Trinitron CRTs in all of its surveillance colour monitors. Sony's Trinitron technology allows for high resolution and the best possible picture reproduction. With its completely flat and straight vertical surface, the Trinitron CRT provides the lowest purity imperfection available in CRT technology today.
Moreover, Sony manufactures its own CRTs to assure quality performance in all of its monitors.



Time-lapse Recording Technologies

Hybrid Recording (HSR-2P)

Sony's HSR-2P digital time-lapse recorder uses both a hard disk drive (HDD) and a DV (digital video) tape drive for storage. The image data is first recorded onto the HDD and is then transferred to DV tape. This "hybrid" approach to recording has two major advantages.
The first advantage is reduced maintenance. Since the DV tape drive works only while recording the image data being transferred from the HDD, the tape transport and heads are stationary most of the time.
This significantly reduces the need for head maintenance.
The second advantage is multiple protection. In the unlikely event that the DV tape drive fails, recording continues onto the HDD. Conversely, if the HDD fails, recording continues on the DV tape.



<HSR-2P Recording Process>

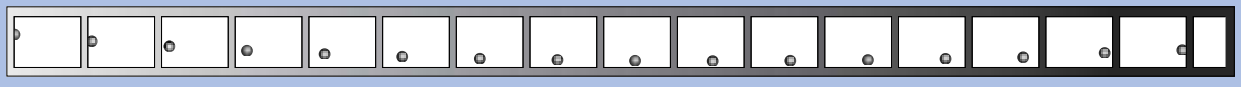
Digital Recording With Large Capacity HDD (HSR-X Series)

Sony HSR-X Series of digital hard disk time-lapse recorders deliver superb quality images, outstanding reliability and greater flexibility to your surveillance systems. With each of these recorders, you get all the benefits associated with a digital format - clear, crisp, undistorted images and quick access to images.
The HSR-X200P is a Single Channel Recorder with an 80 GB HDD (Hard Disk Drive).
The HSR-X209P and HSR-X216P are high quality, Multi Channel Recorders that combine the functions of a recorder and a multiplexer into one compact unit. Using the built-in multiplexing capability, up to 9 (HSR-X209P)/16 (HSR-X216P) camera pictures can be recorded and monitored independently. Incorporating the larger capacity 320 GB HDD, these recorders can dramatically extend recording times.

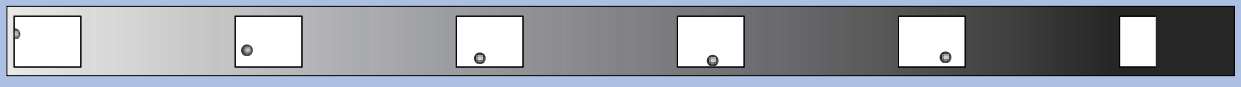
RealAction Recording (SVT-RA96P)

The Sony time lapse VCR features RealAction high density recording. For example, conventional time lapse VCRs record only 5.5 fields per second in 24 hour recording mode. However, Sony RealAction technology allows recording of 16.6 fields per second - that's three times as much information. This recording density ensures smooth, natural recording of even fast moving objects.

RealAction recording 16.6 fields/s



Normal time-lapse recording 5.5 fields/s



CAMERAS

Network Cameras - Remote Monitoring Via the Internet

SNC-Z20P NEW

- Fixed IP network colour camera with integrated zoom lens
- Remote monitoring from PCs using Microsoft® Internet Explorer or Sony's IMZ-RS Series Intelligent Monitoring Software or a PDA
- 100Base-TX/10Base-T Ethernet
- Power over Ethernet (PoE)
- Simultaneous access up to 50 users
- Easy GUI based operation
- Built-in 18x auto-focus zoom lens (216x with digital zoom)
- High picture quality - 1/4 type 440,000 pixels IT CCD with Exwave HAD technology
- High sensitivity - 0.7 lx (colour)/0.01 lx (B/W) at F1.4
- JPEG compression
- Up to 25 fps with VGA quality (640 x 480)
- Four selectable image sizes (including 736 x 544)
- Analogue composite video output for local analogue viewing or recording
- Image transfer using FTP or SMTP
- One PC card slot* - supports "Memory Stick™", Flash ATA memory card and ATA HDD card
- Wireless connection capability*
- Activity detection and alarm trigger functions
- RS-232C transparency interface for control and operation of external equipment
- Day/Night mode - allows images to be viewed even in low light conditions
- AC 24 V or DC 12 V external power capability

SNC-Z20P Rear

* Please contact a local sony sales office or authorized dealer for compatible PC and wireless cards.

SNC-CS3P NEW

- Fixed IP network colour camera with CS-mount auto iris vari-focal lens
- Remote monitoring from PCs using Microsoft Internet Explorer or Sony's IMZ-RS Series Intelligent Monitoring Software or a PDA
- Easy GUI based operation
- Simultaneous access up to 50 users
- 100Base-TX/10Base-T Ethernet
- Auto-iris vari-focal lens (f=3.0 to 8.0 mm, F1.0)
- High picture quality - 1/3 type 440,000 pixels IT CCD with Exwave HAD technology
- High sensitivity - 0.5 lx at F1.0
- JPEG compression
- Up to 25 fps with VGA quality (640 x 480)
- Four selectable image sizes (including 736 x 544)
- Analogue composite video output for local analogue viewing or recording
- Image transfer using FTP or SMTP
- Activity detection and alarm trigger functions
- RS-232C transparency interface for control and operation of external equipment
- Selectable power supply - automatically detects AC 24 V or DC 12 V for proper operation

SNC-CS3P Rear

SNC-RZ30P

- IP network colour camera with integrated pan/tilt/zoom
- Remote monitoring from PCs using Microsoft Internet Explorer or Sony's IMZ-RS Series Intelligent Monitoring Software or a PDA
- 100Base-TX/10Base-T Ethernet
- Simultaneous access up to 50 users
- Easy GUI based operation
- High-speed and quiet pan/tilt mechanism
- Integral 25x auto-focus zoom lens covers a wide range of viewing angles
- High picture quality - 1/6 type 800,000 pixel IT Super HAD CCD™ with a DSP
- High sensitivity - 3.0 lx (colour)
- JPEG compression
- Up to 25 fps with VGA quality (640 x 480)
- Four selectable image sizes (including 736 x 544)
- Analogue composite video output for local analogue viewing or recording
- Image transfer using FTP or SMTP
- Activity detection and alarm trigger functions
- 16 position presets
- Day/Night mode - allows images to be viewed even in low light conditions
- Image stabilizer
- RS-232C/485 transparency interface for control and operation of external equipment
- Two Type II PC card slots*1 - supports Memory Stick, Flash ATA memory card and ATA HDD card
- Wireless connection capability*1
- Ceiling mount operation or desk top*2

SNC-RZ30P Rear

*1 Please contact a local sony sales office or authorized dealer for compatible PC and wireless cards.

*2 When the SNC-RZ30P is desk mounted, the video generated from the analogue composite signal will be inverted.

SNC-VL10P

- Fixed IP network colour camera for the broadband era
- Remote monitoring from PCs using Microsoft Internet Explorer, Netscape® Navigator, Java Applet-enabled browser or Sony's IMZ-RS Series Intelligent Monitoring Software
- Simultaneous access up to 100 users
- Easy GUI based operation
- Various network-connection capabilities (10Base-T Ethernet and USB modem support)
- Easy installation and set-up
- Wavelet image compression format - ideal for network transmission
- Five selectable image sizes per PC - adjust for individual network bandwidth
- Focus-area setting - user can view picture detail without losing the whole image
- Alarm functions including activity detection, one sensor input and two sensor outputs
- High picture quality - 1/3 type IT Super HAD CCD with colour DSP technology
- High sensitivity - 2.0 lx at F1.4 (50 IRE)
- Horizontal resolution - 480 TV lines
- Built-in 2.3x vari-focal lens covers a wide range of viewing angles
- Built-in web server - no special viewer software required
- Analogue composite video output - PAL
- RS-232C/485 transparency interface for control & operation of external equipment
- CS-mount
- Accepts DC servo lens
- CCD IRIS™

SNC-VL10P Rear

CAMERAS

Colour CCD Cameras

SSC-DC393P/DC398P

- Ideal for low light applications
- 1/3 type IT CCD with Exwave HAD technology
- Horizontal resolution - 480 TV lines
- Extremely high sensitivity - 0.7 lx at F1.2 (50 IRE)
- Compact and stylish design
- Built-in tripod screw holes for easy installation
- Digital Signal Processing (DSP)
- Sync system
  SSC-DC393P: Internal/AC Line Lock
  SSC-DC398P: AC Line Lock
- Backlight compensation: BLC ON/OFF switchable
- Turbo AGC: ON/OFF switchable
- Wide range CCD IRIS (ON/OFF switchable, 1/50 to 1/100,000 s)
- CCD IRIS function allows for the use of low cost manual iris lenses
- Wide range Auto Tracing White balance (ATW)
- Accepts video or DC auto iris lenses
- CS-mount
- Variety of power requirements
  SSC-DC393P: automatically selects AC 24 V or DC 12 V for proper operation
  SSC-DC398P: AC 220 to 240 V operation

SSC-DC393P Rear

SSC-DC398P Rear

SSC-DC193P/DC198P

- Ideal for low light applications
- 1/3 type IT Super HAD CCD
- Horizontal resolution - 330 TV lines
- High sensitivity - 0.6 lx at F1.2 (50 IRE)
- Compact and stylish design
- Built-in tripod screw holes for easy installation
- Digital Signal Processing (DSP)
- Sync system
  SSC-DC193P: Internal/AC Line Lock
  SSC-DC198P: AC Line Lock
- Backlight compensation: BLC ON/OFF switchable
- Turbo AGC: ON/OFF switchable
- Wide range CCD IRIS (ON/OFF switchable, 1/50 to 1/100,000 s)
- CCD IRIS function allows for the use of low cost manual iris lenses
- Wide range Auto Tracing White balance (ATW)
- Accepts video or DC auto iris lenses
- CS-mount
- Variety of power requirements
  SSC-DC193P: automatically selects AC 24 V or DC 12 V for proper operation
  SSC-DC198P: AC 220 to 240 V operation

SSC-DC193P Rear

SSC-DC198P Rear

SSC-DC593P/DC598P

- Ideal for Day/Night surveillance applications
- 1/3 type IT CCD with DynaView™ technology
- Wide dynamic range with DynaView technology - ideal for obtaining clear colour images under severe highlight or backlight conditions
- Day/Night mode - increases the camera's sensitivity and allows for use with IR illuminators (Night mode)
- Horizontal resolution - 480 TV lines
- High sensitivity - Colour: 0.8 lx (F1.4, 50 IRE), B/W (Day/Night mode): 0.07 lx (F1.4, 50 IRE)
- Backlight compensation: DYNAVIEW/SPOT/WEIGHT/OFF switchable
- White balance: ATW PRO/ATW/3200K/5600K/MANUAL/DUAL WB switchable
- Dual white balance mode - high quality colour reproduction of indoor and outdoor scenes under different colour temperatures
- Wide range CCD IRIS (1/50 to 1/100,000 s)
- Sync system: Internal/AC Line Lock
- Built-in activity detection and alarm trigger functions
- Privacy Zone Masking function
- Two preset memories for camera setting
- RS-485 interface for control
- CS-mount
- Accepts video or DC auto iris lenses
- Variety of power requirements
  SSC-DC593P: automatically selects AC 24 V or DC 12 V for proper operation
  SSC-DC598P: AC 220 to 240 V operation

SSC-DC593P Rear

SSC-DC598P Rear

SSC-DC50AP/DC54AP/DC58AP

- Especially designed for surveillance applications
- 1/2 type IT CCD with Exwave HAD technology
- Horizontal resolution - 470 TV lines
- Extremely high sensitivity - 0.8 lx at F1.2 (50 IRE)
- Low smear level (-120 dB)
- Backlight compensation by Smart Control for faster backlight compensation
- Preset Auto Exposure (AE) settings
- Turbo AGC: TURBO/NORMAL/OFF switchable
- Aperture/Sharp Mode: SHARP/NORMAL switchable
- ATW PRO/ATW/AWB/Preset colour temperature settings
- Accepts video or DC auto iris lenses
- C/CS-mount
- SSC-DC50AP provides single cable operation (video/sync/power triple multiplex transmission) for easy installation with the optional YS-W170P/W270P camera adaptor (Mode A)
- SSC-DC50AP provides monitor out function for on-the-spot camera positioning (Mode B)
- Alternative power source operation: DC 12 V for SSC-DC50AP, AC 24 V for SSC-DC54AP, AC 220 to 240 V for SSC-DC58AP

SSC-DC50AP Rear

SSC-DC54AP Rear

SSC-DC58AP Rear

CAMERAS

B/W CCD Cameras

SSC-M383CE/M388CE

- Ideal for low light applications
- 1/3 type IT CCD with Exwave HAD technology
- Horizontal resolution - 570 TV lines
- Extremely high sensitivity - 0.07 lx at F1.2 (50 IRE)
- Compact and stylish design
- Built-in tripod screw holes for easy installation
- Sync system
  SSC-M383CE: Internal/AC Line Lock
  SSC-M388CE: AC Line Lock
- Backlight compensation: BLC ON/OFF switchable (when CCD IRIS is ON)
- Turbo AGC (up to 24 dB): ON/OFF switchable
- Wide range CCD IRIS (ON/OFF switchable, 1/50 to 1/100,000 s)
- CCD IRIS function allows for the use of low cost manual iris lenses
- Accepts video or DC auto iris lenses
- CS-mount
- Variety of power requirements
  SSC-M383CE: automatically selects AC 24 V or DC 12 V for proper operation
  SSC-M388CE: AC 220 to 240 V operation

SSC-M383CE Rear

SSC-M388CE Rear

SSC-M183CE/M188CE

- Ideal for low light applications
- 1/3 type IT Super HAD CCD
- Horizontal resolution - 380 TV lines
- Extremely high sensitivity - 0.06 lx at F1.2 (50 IRE)
- Compact and stylish design
- Built-in tripod screw holes for easy installation
- Sync system
  SSC-M183CE: Internal/AC Line Lock
  SSC-M188CE: AC Line Lock
- Backlight compensation: BLC ON/OFF switchable (when CCD IRIS is ON)
- Turbo AGC (up to 24 dB): ON/OFF switchable
- Wide range CCD IRIS (ON/OFF switchable, 1/50 to 1/100,000 s)
- CCD IRIS function allows for the use of low cost manual iris lenses
- Accepts video or DC auto iris lenses
- CS-mount
- Variety of power requirements
  SSC-M183CE: automatically selects AC 24 V or DC 12 V for proper operation
  SSC-M188CE: AC 220 to 240 V operation

SSC-M183CE Rear

SSC-M188CE Rear

Vari-focal Lens Cameras

SSC-CX13VP/CX18VP/MX13VCE/MX18VCE

- Built-in auto iris vari-focal lens covers a wide range of viewing areas
- 1/4 type IT Super HAD CCD with colour DSP technology (SSC-CX13VP/CX18VP)
- 1/4 type IT B/W CCD with Super HAD technology (SSC-MX13VCE/MX18VCE)
- High resolution and picture quality: 480 TV lines (SSC-CX13VP/CX18VP), 570 TV lines (SSC-MX13VCE/MX18VCE)
- High sensitivity - 1.8 lx (SSC-CX13VP/CX18VP) or 0.3 lx (SSC-MX13VCE/MX18VCE) at F1.4 (50 IRE, AGC ON)
- Compact and stylish design
- Tripod screw holes for easy installation
- AC Line Lock capability for AC operation
- Turbo AGC (6 dB more gain than conventional gain): TURBO/NORMAL/OFF switchable
- Backlight compensation: BLC ON/OFF switchable
- Wide range Auto Tracing White balance (ATW) (SSC-CX13VP/CX18VP)
- Variety of power requirements
  SSC-CX13VP/MX13VCE: automatically selects AC 24 V or DC 12 V for proper operation
  SSC-CX18VP/MX18VCE:
  AC 220 to 240 V operation

SSC-CX13VP/MX13VCE Rear

SSC-CX18VP/MX18VCE Rear

CAMERAS

Fixed Mini Dome Cameras

SSC-CD73VP NEW

Optional accessory: In ceiling bracket (YT-ICB73V)

- Built-in CS-mount auto iris vari-focal lens covers a wide range of viewing angles (f=3.0 to 8.0 mm)
- 1/4 type IT Super HAD CCD
- High resolution - 480 TV lines
- High sensitivity - 0.9 lx (colour mode)/0.2 lx (B/W mode) at F1.0 (50 IRE, AGC On)
- Rugged design - IP66 rated
- Day/Night mode - automatically senses lighting changes and switches camera mode from colour to B/W or via an external trigger
- BNC type analogue composite video output
- Designed for easy mounting and installation
- AC Line Lock capability for AC operation
- Turbo AGC (up to 24 dB): ON/OFF switchable
- Backlight compensation: BLC ON/OFF switchable
- Wide range Auto Tracing White balance (ATW)
- CS-mount
- Dual power capability - automatically selects AC 24 V or DC 12 V for proper operation

SSC-CD43VP NEW

Optional accessory: In ceiling bracket (YT-ICB43V)

- Built-in CS-mount auto iris vari-focal lens covers a wide range of viewing angles (f=3.0 to 8.0 mm)
- 1/4 type IT Super HAD CCD
- High resolution - 480 TV lines
- High sensitivity - 0.8 lx at F1.0 (50 IRE, AGC On)
- BNC type analogue composite video output
- Designed for easy mounting and installation
- AC Line Lock capability for AC operation
- Turbo AGC (up to 24 dB): ON/OFF switchable
- Backlight compensation: BLC ON/OFF switchable
- Wide range Auto Tracing White balance (ATW)
- CS-mount
- Dual power capability - automatically selects AC 24 V or DC 12 V for proper operation

SSC-MD53VCE

Optional accessories: Clear dome cover (YT-LDC53V)
In-ceiling bracket (YT-ICB53V)

- Built-in auto iris vari-focal lens covers a wide range of viewing angles
- 1/4 type IT Super HAD CCD
- High resolution - 570 TV lines
- High sensitivity - 0.4 lx at F1.4 (50 IRE, AGC ON, clear cover)
- Rugged design - IP66 rated
- Designed for easy mounting and installation
- AC Line Lock capability for AC operation
- Turbo AGC (up to 24dB): TURBO/NORMAL/OFF switchable
- Backlight compensation: BLC ON/OFF switchable
- Dual power capability - automatically selects AC 24 V or DC 12 V for proper operation

SSC-MD33VCE

Optional accessories: Clear dome cover (YT-LDC53V)
In-ceiling bracket (YT-ICB53V)

- Built-in auto iris vari-focal lens covers a wide range of viewing angles
- 1/4 type IT Super HAD CCD
- High resolution - 570 TV lines
- High sensitivity - 0.4 lx at F1.4 (50 IRE, AGC ON, clear cover)
- Designed for easy mounting and installation
- AC Line Lock capability for AC operation
- Turbo AGC (up to 24dB): TURBO/NORMAL/OFF switchable
- Backlight compensation: BLC ON/OFF switchable
- Dual power capability - automatically selects AC 24 V or DC 12 V for proper operation

Camera Adaptors

YS-W270P

- Camera adaptor for SSC-DC50AP colour CCD camera
- Provides DC power and video/sync signal between the adaptor and SSC-DC50AP camera over a single coaxial cable
- Up to four SSC-DC50AP cameras can be connected
- Internal or external synchronisation with MPX-VS or MPX-VD
- Maximum cable length: 600 m with RG-11A/U (7C-2V) coaxial cable

YS-W270P Rear

YS-W170P

- Camera adaptor for SSC-DC50AP colour CCD camera
- Provides DC power and video/sync signal between the adaptor and SSC-DC50AP camera over a single coaxial cable
- Internal or external synchronisation with MPX-VS or MPX-VD
- Maximum cable length: 600 m with RG-11A/U (7C-2V) coaxial cable

YS-W170P Rear

NETWORK MONITORING SOFTWARE

Intelligent Monitoring Software

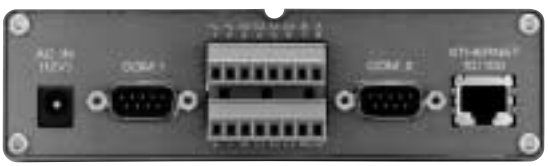
IMZ-RS104/RS109/RS116/RS132 NEW

- Remote control, monitoring and recording of up to 32 video cameras
  - IMZ-RS104: Control PC software for 4 network video sources
  - IMZ-RS109: Control PC software for 9 network video sources
  - IMZ-RS116: Control PC software for 16 network video sources
  - IMZ-RS132: Control PC software for 32 network video sources
- "Layout Editor" creates customised site layout
- Manual/Scheduled/Alarm/Pre-alarm recording capability
- Search Recording GUI makes it quick and easy to retrieve a specific recording
- Playback during recording
- Up to 25 fps with VGA quality (640 x 480)
- Camera Pan/Tilt/Zoom control capability
- 16 preset positions

VIDEO NETWORK STATION

SNT-V304

- Ideal for video monitoring over networks
- Enables up to four video surveillance cameras to be remotely monitored and controlled over existing networks (LAN, WAN, telephone lines)
- GUI based monitoring and control using networked PCs utilizing standard web browser
- Easy to install, expand and maintain
- Multi-user access and password protection
- High refresh rates provide near-motion pictures
- S-Video input or video input 1
- Remote camera or HSR-2P recorder control
- Alarm image buffering allows for storage of pre-alarm and post-alarm images
- When an alarm occurs, a JPEG file showing the alarm event can be sent to a pre-determined e-mail address or server
- Alternative viewing modes
- TCP/IP, 100Base-TX/10Base-T interface
- Image update to FTP server
- Relay out control



SNT-V304 Rear

MONITORS

Colour Monitors

SSM-20L1 NEW

- 20-inch Trinitron colour monitor
- Horizontal resolution - 600 TV lines
- Accepts PAL and NTSC
- Automatic beam current feedback circuit for stable white balance
- Loop-through Composite and Loop-through Y/C inputs with 75 Ω automatic termination
- On-screen menu operation available in six languages
- EIA standard rack mount capability with optional SLR-103C
- Metal cabinet for high immunity to external electrical and magnetic interference
- Built-in speaker for audio monitoring

SSM-20L1 Rear

SSM-14L1 NEW

- 14-inch Trinitron colour monitor
- Horizontal resolution - 600 TV lines
- Accepts PAL and NTSC
- Automatic beam current feedback circuit for stable white balance
- Loop-through Composite and Loop-through Y/C inputs with 75 Ω automatic termination
- On-screen menu operation available in six languages
- EIA standard rack mount capability with optional MB-502C and SLR-102
- Metal cabinet for high immunity to external electrical and magnetic interference
- Built-in speaker for audio monitoring

SSM-14L1 Rear

Colour Monitor Optional Accessories

- **MB-502C** Rack mount bracket for 14-inch monitor
- **SLR-102** Slide rail kit for 14-inch monitor
- **SLR-103C** Slide rail kit for 20-inch monitor

SURVEILLANCE VIDEO RECORDERS

Digital Hard Disk Video Recorders

HSR-X200P

Optional accessories: Expansion board
HSBK-X201 (80 GB)
HSBK-X201/16 (160 GB)

- Single channel digital hard disk recorder
- 80 GB HDD (ATA/ATAPI-5 standard) - expandable to 240 GB
- Recording time of 671 hours at 1 fps
- Compatible with YS-DX516P/DX416CE/DX504P and most other existing multiplexers
- Real time OS (operating system) for increased reliability
- High-resolution & high picture quality recording and playback (Field & Frame recording)
- Motion-JPEG compression
- Network capability with optional LAN card
- Data backup function with optional SCSI card and DDS
- Image and audio transfer to Memory Stick, CompactFlash™ or MicroDrives with a PC card adaptor
- Activity detection sensor/search - recognizes changes in luminance
- Digital zoom function (2x zoom)
- Easy operation with Jog/Shuttle and independent operation buttons
- RS-232C/485 interface for PC control
- HDD mirroring function
- Audio single channel recording and playback
- Series recording capability
- Various languages (English/French/Spanish/German)

HSR-X200P Rear

HSR-X209P NEW

- Built-in 9 channel multiplexer
- Pre-installed 320 GB large capacity HDD (160 GB x 2, ATA/ATAPI-5 standard)
- Recording time of 2686 hours (high mode, 1 fps)
- High-resolution & high picture quality recording and playback
- Motion-JPEG compression
- Network capability with optional LAN card
- Data backup function with optional SCSI card and DDS
- Image and audio transfer to Memory Stick, CompactFlash or MicroDrives with a PC card adaptor
- Multi-point activity detection sensor/search - recognizes changes in luminance
- Digital zoom function (2x zoom)
- Easy operation with Jog/Shuttle and independent operation buttons
- RS-232C/485 interface for PC control
- HDD mirroring function
- Audio single channel recording and playback
- Various languages (English/French/Spanish/German)

HSR-X209P Rear

HSR-X216P NEW

- Built-in 16 channel multiplexer
- Pre-installed 320 GB large capacity HDD (160 GB x 2, ATA/ATAPI-5 standard)
- Recording time of 2686 hours (high mode, 1 fps)
- High-resolution & high picture quality recording and playback
- Motion-JPEG compression
- Network capability with optional LAN card
- Data backup function with optional SCSI card and DDS
- Image and audio transfer to Memory Stick, CompactFlash or MicroDrives with a PC card adaptor
- Multi-point activity detection sensor/search - recognizes changes in luminance
- Digital zoom function (2x zoom)
- Easy operation with Jog/Shuttle and independent operation buttons
- RS-232C/485 interface for PC control
- HDD mirroring function
- Audio single channel recording and playback
- Various languages (English/French/Spanish/German)

HSR-X216P Rear

HSR-2P

- Hybrid digital recorder for high performance digital video recording and archiving
- Playback during recording offers greater flexibility in providing access to the information without stopping the recording
- 60 GB HDD offers high storage capacity for immediate access to the information recorded onto the HDD
- High resolution - over 500 TV lines (Super mode)
- Excellent S/N ratio - 48 dB
- Large storage capacity - 60 GB using DV 270MEM2 tape
- High reliability and low maintenance utilizing hybrid configuration of HDD and DV tape drive
- Built-in 4 input multiplexer board - field upgrade capable to 16 inputs using 3 additional 4 input cards, HSRA-11
- Time/date and alarm event search capabilities
- Excellent backup features - writes to DV in case of HDD failure or vice versa
- Continuous recording function without breaks even while changing or rewinding tapes
- High refresh rate recording of each camera
- Two monitoring outputs for simultaneous playback on the first monitor and monitoring on the second monitor
- RS-232C interface for PC control
- Pre-alarm recording capability for event recording
- Full control of HSR-2P over a network when used with Sony's SNT-V304 Video Network Station

HSR-2P Rear

SURVEILLANCE VIDEO RECORDERS

Analogue Time Lapse Video Recorders

SVT-RA96P

Optional accessories:
Remote control unit SVT-RM10
RS-232C/485 interface board SVT-RS100

- Quality recording and playback for those critical moments
- Incorporates Sony's 'RealAction' technology for high density recording of 16.6 fields per second (24-hour mode)
- Maximum 96-hour time lapse recording is available with an E-180 tape
- Maximum 128-hour time lapse recording is available with an E-240 tape
- Five different time lapse recording/playback modes
- Adaptive Picture Control (APC) records clear images even after long periods of use
- Audio recording and playback in 6/18/30 (E-180) or 8/24/40 (E-240) hour modes
- Rapid fast-forward and rewind: 100 seconds with an entire E-180 tape
- RS-232C/485 interface with the optional SVT-RS100 interface board
- Built-in time/date generator, 30-day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
- Record check, alarm data list, alarm scan/recall/search capabilities
- Camera switcher/multiplexer interface
- Field advance/reverse playback capability
- Tape before-end signal output capability
- Warning signal output capability
- Video loss alarm capability
- Remote control capability of basic operational functions through ϕ 3.5 mm mini jack

SVT-RA96P Rear

SVT-N72P

Optional accessories:
Remote control unit SVT-RM10
RS-232C/485 interface board SVT-RS100

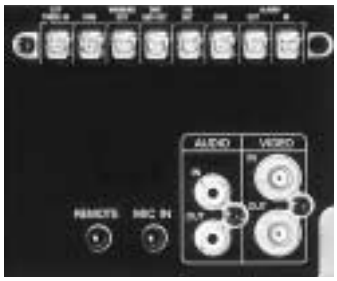
- Quality recording and playback for those critical moments
- Maximum 72-hour time lapse recording is available with an E-180 tape
- Four different time lapse recording/playback modes
- Adaptive Picture Control (APC) records clear images even after long periods of use
- Audio recording and playback in 3/12/24 hour modes
- Rapid fast-forward and rewind: 100 seconds with an entire E-180 tape
- RS-232C/485 interface with the optional SVT-RS100 interface board
- Built-in time/date generator, 30-day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
- Record check, alarm data list, alarm scan/recall/search capabilities
- Field advance/reverse playback capability
- Tape before-end signal output capability
- Warning signal output capability
- Video loss alarm capability
- Remote control capability of basic operational functions through ϕ 3.5 mm mini jack

SVT-N72P Rear

SVT-N24P

Optional accessory:
Remote control unit SVT-RM10

- Quality recording and playback for those critical moments
- Maximum 24-hour time lapse recording is available with an E-180 tape
- Compact size - only 240 mm (9 1/2 inches) in width
- Two different time lapse recording/playback modes
- Adaptive Picture Control (APC) records clear images even after long periods of use
- Audio recording and playback in time-lapse mode
- Rapid fast-forward and rewind: 100 seconds with an entire E-180 tape
- Built-in time/date generator, 30-day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
- Record check, alarm data list, alarm scan/recall/search capabilities
- Field advance/reverse playback capability
- Tape before-end signal output capability
- Warning signal output capability
- Video loss alarm capability
- Remote control capability of basic operational functions through ϕ 3.5 mm mini jack

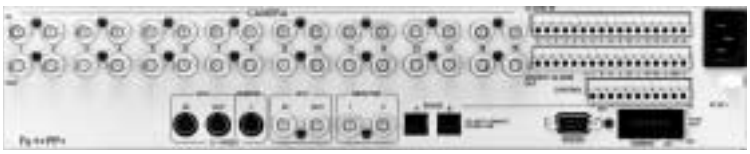


SVT-N24P Rear

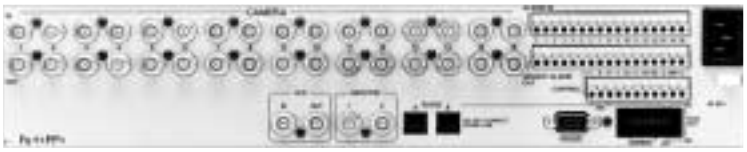
MULTIPLEXERS

YS-DX516P/DX416CE

- Full duplex video multiplexer that supports up to16 camera inputs
  YS-DX516P: Colour
  YS-DX416CE: B/W
- Multiplex recording to one VCR while switching between each camera by a field for precise surveillance of multiple points
- Live pictures can be displayed in full screen, sequence, quad and multi-screen (4/9/13/16) while simultaneously recording
- Playback can be reviewed in full screen, sequence, and multi-screen (4/9/13/16)
- Individual sequence dwell time
- Activity detection
- Video loss alarm
- Alarm duration: The alarm duration of each video camera can be programmed individually
- Monitor masking for specific cameras
- RS-232C/485 compatible
- Menu: English/French/German



YS-DX516P Rear



YS-DX416CE Rear

YS-DX504P

- Half duplex colour video multiplexer that supports up to 4 cameras
- Multiplexing recording to one VCR while switching between each camera by a field for precise surveillance of multiple points
- Live images can be displayed in full screen, sequence and quad while simultaneously recording
- Playback can be reviewed in full screen, sequence and quad
- Zoom and freeze functions are available in full screen and quad
- Activity detection
- Video loss alarm
- Alarm duration: The alarm duration of each video camera can be set individually
- RS-232C compatible
- Menu: English/French/German

YS-DX504P Rear

PRINTERS

Colour Video Printers

UP-51MD NEW

- High-resolution of approx. 300 dpi
- A5 size colour print in approx. 22 seconds*
- 2, 4, 8 or 16-split/duplicate image prints mode
- RGB, Y/C, and composite video inputs
- Wired and wireless remote controls with the optional RM-5500 Remote Commander
- External control via RS-232C interface
- Eight frame memories capability
- Optional RM-91 Remote Commander for easy printer control

* When measured at high-speed mode using the UPC-510 Colour Printing Pack

UP-20 NEW

- Photo-realistic quality prints with Sony dye sublimation printing technology
- Near A6 size dye sublimation colour printer
- High-resolution of approx. 400 dpi
- Near A6 size print in approx. 17 seconds*
- Compact design enables the UP-20 to fit into a limited space and be rack-mounted on a medical cart side by side with other equipment
- Front-loading operation allows easy maintenance and flexible set up
- RS-232C port for remote control operation
- 2 or 4-split image prints mode
- Four frame memory
- Worldwide AC power supply: AC 100 to 120 V, AC 220 to 240 V
- Convenient remote control with the optional RM-91/RM-5500 Remote Commander
- Monitor loop through for system saving power
- Y/C and analogue composite inputs

* Measured in high-speed mode with the UPC-21S Colour Printing Pack (does not include data-transfer time)

UP-21MD NEW

- Photo-realistic quality prints with Sony dye sublimation printing technology
- High resolution of 403 dpi
- A6 size colour print in approx. 17 seconds*
- Easy-to-use colour adjustment function
- Compact design
- 2 or 4-split prints mode
- Four frame memories capability
- Front-loading operation allows easy maintenance and flexible set up
- Accepts and outputs an analogue RGB, S-Video (Y/C) or composite video signal
- RS-232C port for remote control operation
- Convenient remote control with the optional RM-91/RM-5500 Remote Commander
- Worldwide AC power supply: AC 100 to 120 V, AC 220 to 240 V

* Measured in high-speed mode with the UPC-21S Colour Printing Pack

PRINTERS

Digital Colour Printer

UP-D23MD NEW

- Photo-realistic quality prints with Sony dye sublimation printing technology
- High resolution of 403 dpi
- A6 size colour print in approx. 19 seconds*[1]
- Compact design enables the UP-D23MD to fit into the limited space and to be rack mounted on a medical cart side by side with other equipment
- Front-loading operation allows for easy maintenance and flexible set up
- USB interface (Rev. 2.0, Hi-speed)
- Resize-to-fit feature allows users to enlarge images of VGA (640 x 480 dots), SVGA (800 x 600 dots) and XGA(1024 x 768 dots) to the approx. 1,520x1,144 dots size image*[2] or approx. 2,000 x 1,520 dots size image*[3]
- Grey balance adjustment capability
- Image spooling function (Two frame memories)
- Worldwide AC power supply: AC 100 to 120 V, AC 220 to 240 V

*1 Measured in high-speed mode with the UPC-21S (does not include data-transfer time)

*2 When using the UPC-21S

*3 When using the UPC-21L

B/W Video Graphic Printers

UP-960CE

- Thermal video graphic printer with 256 steps of gradation grey level
- Large print size of 190 x 142 mm in standard mode
- High speed printing of approx. 12 seconds in standard mode
- Approx. 126 prints out of UPP-210HD/210SE (25 m)
- Frame/Field memory selectable
- Printing direction selectable: Standard/Side/Reverse
- Positive/Negative printing
- Normal/Wide 1/Wide 2 scan selectable
- 4:3/1:1 aspect ratio selectable
- CCIR/EIA automatic selection
- Multiple copy function

UP-895CE

- Thermal video graphic printer with 256 steps of gradation grey level
- High speed printing of approx. 3.9 seconds*
- Wide scanning function (Normal/Wide 1/Wide 2 selectable)
- 2 x zoom for either half of picture in either Standard or Side mode
- Approx. 203 prints out of UPP-110HG (18 m)
- Frame/Field memory selectable
- Printing direction selectable: Standard/Side/Reverse
- Positive/Negative printing
- 4:3/1:1 aspect ratio selectable
- CCIR/EIA automatic selection
- Multiple copy function

* When smoothing feature is turned off and printer is set to standard print mode

B/W Digital Graphic Printer

UP-D895 NEW

- Parallel (IEEE 1284) and USB (version. 1.0) interfaces
- Resize-to-fit feature to enlarge images for printing
- Resolution of 325 dpi and 256 steps of grey level for high picture quality
- High-speed printing of approx. 3.8 seconds*
- Multiple print modes available for a variety of applications
- 8 MB picture memory for panoramic-size prints
- Compact, space-saving design
- Worldwide AC power supply: AC 100 to 120 V, AC 220 to 240 V

* Does not include data-transfer time

SPECIFICATIONS

Network Cameras

		SNC-Z20P	SNC-CS3P
CPU		32-bit RISC processor	32-bit RISC processor
Flash memory		8 MB	8 MB
RAM		32 MB	32 MB
Web browser		Microsoft Internet Explorer version 5.5 or 6.0	Microsoft Internet Explorer version 5.5 or 6.0
Protocols		TCP/IP, HTTP, ARP, ICMP, DHCP, FTP, SMTP, DNS, NTP, SNMP	TCP/IP, HTTP, ARP, ICMP, DHCP, FTP, SMTP, DNS, NTP, SNMP
Image compression	Algorithm	JPEG	JPEG
	Rate	1/5 to 1/60 (10 steps)	1/5 to 1/60 (10 steps)
Performance	Frame rate	25 fps (640 x 480)	25 fps (640 x 480)
Security		Password protection IP-filtering	Password protection IP-filtering
Pickup device		1/4 type Interline Transfer CCD with Exwave HAD technology	1/3 type Interline Transfer CCD with Exwave HAD technology
Picture elements (HxV)		768 x 582	768 x 582
Image size (HxV)		736 x 544, 640 x 480, 320 x 240, 160 x 120	736 x 544, 640 x 480, 320 x 240, 160 x 120
Built-in lens		18x zoom (focal length: 4.1 to 73.8 mm)	Vari-focal (focal length: 3.0 to 8.0 mm)
View angle		48° (wide) to 2.7° (tele) 73° (wide) to 4.7° (tele) with VCL-0637H	91° (wide) to 36° (tele)
Iris		Auto/Manual	Auto/Manual
Minimum object distance		W=10 mm, T=800 mm	200 mm
Lens mount		–	CS
White balance		Auto, ATW, Indoor, Outdoor, One push WB, Manual	Auto, ATW, Indoor, Outdoor, One push WB, Manual
Focus		Auto/Manual (Near, Far, One-push autofocus)	Manual
Electronic shutter		1 to 1/10,000 s	1/60 to 1/10,000 s
Gain		Auto/Manual (-3 dB to +28 dB)	Auto/Manual
Exposure		Auto/Shutter-priority/Iris-priority/Manual	Auto/CCD iris/Manual
EV compensation		-1.75 to +1.75 (15 steps)	-1.75 to +1.75 (15 steps)
Pan angle		–	–
Tilt angle		–	–
Analogue video output	Signal system	PAL	PAL
	Sync system	Internal	Internal
	Horizontal resolution	460 TV lines	480 TV lines
	S/N ratio	Better than 50 dB	Better than 50 dB
	Minimum illumination	0.7 lx (colour)/0.01 lx (B/W)	0.5 lx
I/F and I/O		Analogue composite video out (BNC x 1) 100Base-TX/10Base-T Ethernet (RJ-45 x 1) PCMCIA Type II (1) Sensor in (1), Alarm out (2) RS-232C (for transparency only x 1)	Analogue composite video out (BNC x 1) 100Base-TX/10Base-T Ethernet (RJ45 x 1) Sensor in (1), Alarm out (2) RS-232C (for transparency only x1)
Operating temperature		0 to 40 °C (32 to 104 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature		-20 to +60 °C (-4 to 140 °F)	-20 to +60°C (-4 to 140 °F)
Power requirements		AC 24 V, 50 Hz/DC 12 V/PoE	AC 24 V, 50 Hz/DC 12 V
Power consumption		9 W	8 W
Mass		800 g (1 lb 12 oz)	697 g (1 lb 9 oz)
Dimension (WxHxD)		80 x 77 x 177 mm (3 1/4 x 3 1/8 x 7 inches)	70 x 57 x 199 mm (2 7/8 x 2 1/4 x 7 7/8 inches)

SPECIFICATIONS

Network Cameras

		SNC-RZ30N	SNC-VL10N
CPU		32-bit RISC processor	32-bit RISC-Embedded processor
Flash memory		8 MB	8 MB (Default home page area: 4.5 MB)
RAM		32 MB (includes 8 MB alarm buffer)	16 MB (Free area 6 MB)
Web browser		Microsoft Internet Explorer version 5.5 or 6.0	Microsoft Internet Explorer version 5.0, 5.5 or 6.0, Netscape Navigator version 4.7 or 6.0, Java Applet-enabled browser
Protocols		TCP/IP, HTTP, ARP, ICMP, DHCP, FTP, SMTP, DNS, NTP, SNMP	TCP/IP, HTTP, ARP, RARP, ICMP, DHCP, PPP, PPPoE, FTP, SMTP, and SNMP
Image compression	Algorithm	JPEG	Wavelet
	Rate	1/5 to 1/60 (10 steps)	1/10 to 1/200 (10 steps)
Performance	Frame rate	Max. 25 fps (640 x 480)	25 fps (360 x 288)
	Local compression rate	–	Max. 25 fps
Security		Password protection IP-filtering	Password-based user authentication IP-filtering (Secure Mode) Image encryption
Pickup device		1/6 type Interline Transfer Super HAD CCD	1/3 type Interline Transfer Super HAD CCD
Picture Elements (HxV)		800,000	752 x 582
Image size (HxV)		736 x 544, 640 x 480, 320 x 240, 160 x 120	720 x 576, 720 x 288, 360 x 288, 180 x 144, 90 x 72
Built-in lens		25x zoom (focal length: 2.4 to 60 mm)	Vari-focal (focal length: 3.5 to 8.0 mm)
View angle		W=45° (H) T=2° (H)	W=73.9° (H), 56.3° (V) T=33.8° (H), 25.8° (V)
Iris		Auto/Manual (F1.6 to close)	Manual (F1.4 to close)
Minimum object distance		W=30 mm, T=800 mm	0.5 m
Lens mount		–	CS
White balance		Auto, ATW, Indoor, Outdoor, One push WB, Manual	ATW
Focus		Auto/Manual (Near, Far, One-push autofocus)	Manual
Electronic shutter		1/3 s to 1/10,000 s	1/50 to 1/100,000 s (CCD IRIS)
Gain		Auto/Manual (-3 dB to +28 dB)	Auto
Exposure		Auto/Shutter-priority/Iris-priority/Manual	Full Auto
EV compensation		-1.75 to +1.75 (15 steps)	–
Pan angle		-170° to +170°	–
Tilt angle		-90° to +25°	–
Analogue video output	Signal system	PAL	PAL
	Sync system	Internal	Internal
	Horizontal resolution	480 TV lines	480 TV lines
	S/N ratio	Better than 48 dB	Better than 50 dB
	Minimum illumination	3.0 lx (colour)	2.0 lx
I/F and I/O		Analogue composite video out (BNC x 1) 100Base-TX/10Base-T Ethernet (RJ-45 x 1) PCMCIA Type II (2) Sensor in (3), Alarm out (2), RS-232C/485 (transparency only, x1)	Analogue composite video out (BNC x 1) 10Base-T Ethernet USB modem RS-232C/485 (transparency only) Sensor I/O Volume for video level Lens (DC servo)
Operating temperature		0 to 40 °C (32 to 104 °F)	-10 to +50 °C (14 to 122 °F)
Storage temperature		-20 to +60 °C (-4 to +140 °F)	-40 to +60 °C (-40 to 140 °F)
Power requirements		DC 12 V via AC adaptor (100 V to 240 V)	DC 12 V via AC adaptor (100 to 240 V) Ethernet Hub/Switching equipment for in-line power, IEEE 802.3af
Power consumption		21.6 W (with ATA HDD card)	6.8 W (DC 12 V)
Mass		1.2 kg (2 lb 10 oz)	350 g (12 oz)
Dimension (WxHxD)		140 x 175 x 144 mm (5 5/8 x 7 x 5 3/4 inches)	96 x 63 x 186 mm (3 7/8 x 2 1/2 x 7 3/8 inches)

Colour CCD Cameras

	SSC-DC393P	SSC-DC398P	SSC-DC193P	SSC-DC198P
Pickup device	1/3 type Interline Transfer CCD with Exwave HAD technology	1/3 type Interline Transfer CCD with Exwave HAD technology	1/3 type Interline Transfer Super HAD CCD	1/3 type Interline Transfer Super HAD CCD
Picture elements (HxV)	752 x 582	752 x 582	500 x 582	500 x 582
Lens mount	CS	CS	CS	CS
Signal system	PAL	PAL	PAL	PAL
White balance	ATW	ATW	ATW	ATW
Sync system	Internal/External	External	Internal/External	External
External sync	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)
V-phase control	±90°	±90°	±90°	±90°
H-Phase control	Yes	Yes	–	–
Horizontal resolution	480 TV lines	480 TV lines	330 TV lines	330 TV lines
S/N ratio (AGC OFF, Weight ON)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (Turbo AGC ON)	0.35 lx at F1.2 (30 IRE) 0.7 lx at F1.2 (50 IRE) 3.5 lx at F1.2 (100 IRE)	0.35 lx at F1.2 (30 IRE) 0.7 lx at F1.2 (50 IRE) 3.5 lx at F1.2 (100 IRE)	0.3 lx at F1.2 (30 IRE) 0.6 lx at F1.2 (50 IRE) 3.0 lx at F1.2 (100 IRE)	0.3 lx at F1.2 (30 IRE) 0.6 lx at F1.2 (50 IRE) 3.0 lx at F1.2 (100 IRE)
Backlight compensation	–	–	–	–
Day/night mode	–	–	–	–
Video output	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)
Power requirements	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50Hz	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50Hz
Power consumption	3.7 W	4.2 W	3.5 W	3.7 W
Mass	360 g (13 oz)	390 g (14 oz)	360 g (13 oz)	390 g (14 oz)
Dimensions (WxHxD)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)

SPECIFICATIONS

Colour CCD Cameras

	SSC-DC593P	SSC-DC598P	SSC-DC50AP	SSC-DC54AP	SSC-DC58AP
Pickup device	1/3 type Interline Transfer CCD with DyneView technology	1/3 type Interline Transfer CCD with DyneView technology	1/2 type Interline Transfer CCD with Exwave HAD technology	1/2 type Interline Transfer CCD with Exwave HAD technology	1/2 type Interline Transfer CCD with Exwave HAD technology
Picture elements (HxV)	752 x 582	752 x 582	752 x 582	752 x 582	752 x 582
Lens mount	CS	CS	C/CS adjustable	C/CS adjustable	C/CS adjustable
Signal system	PAL	PAL	PAL	PAL	PAL
White balance	ATW PRO/ATW/3200K/ 5600K/MANUAI/DUAL WB	ATW PRO/ATW/3200K/ 5600K/MANUAI/DUAL WB	ATW PRO/ATW/AWB/ PRESET 5600K	ATW PRO/ATW/AWB/ PRESET 5600K	ATW PRO/ATW/AWB/ PRESET 5600K
Sync system	Internal/External	Internal/External	Internal/External	Internal/External	Internal/External
External sync	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)	VS and VBS/MPX VS	AC Line Lock (for AC 24 V) VS and VBS	AC Line Lock (for AC 220 to 240 V) VS and VBS
V-phase control	±90°	±90°	–	±90°	±90°
H-Phase control	–	–	Yes	Yes	Yes
Horizontal resolution	480 TV lines	480 TV lines	470 TV lines	470 TV lines	470 TV lines
S/N ratio (AGC OFF, Weight ON)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (Turbo AGC ON)	Colour: 0.8 lx at F1.4 (50 IRE) B/W: 0.07 lx at F1.4 (50 IRE)	Colour: 0.8 lx at F1.4 (50 IRE) B/W: 0.07 lx at F1.4 (50 IRE)	0.4 lx at F1.2 (30 IRE) 0.8 lx at F1.2 (50 IRE)	0.4 lx at F1.2 (30 IRE) 0.8 lx at F1.2 (50 IRE)	0.4 lx at F1.2 (30 IRE) 0.8 lx at F1.2 (50 IRE)
Backlight compensation	DYNAVIEW/SPOT/WEIGHT/OFF switchable	DYNAVIEW/SPOT/WEIGHT/OFF switchable	ON/OFF switchable	ON/OFF switchable	ON/OFF switchable
Day/night mode	COLOR/AUTO/EXTERNAL/B&W switchable	COLOR/AUTO/EXTERNAL/B&W switchable	–	–	–
Video output	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1) Y/C, Mini-Din (1)	Composite, BNC (1) Y/C, Mini-Din (1)	Composite, BNC (1) Y/C, Mini-Din (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)
Power requirements	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50 Hz	1) Multiplexing with YS-W170P/W270P 2) DC 12 V	AC 24 V, 50 Hz	AC 220 to 240 V, 50 Hz
Power consumption	5.8 W	5.6 W	1) 5.5 W supplied from YS-W170P/W270P 2) 4.5 W at DC 12 V	6.0 W	5.5 W
Mass	500 g (1 lb 2 oz)	500 g (1 lb 2 oz)	600 g (1 lb 5 oz)	600 g (1 lb 5 oz)	900 g (2 lb)
Dimensions (WxHxD)	70 x 57 x 129 mm (2 7/8 x 2 1/4 x 5 1/8 inches)	70 x 57 x 129 mm (2 7/8 x 2 1/4 x 5 1/8 inches)	64 x 57 x 137 mm (2 5/8 x 2 1/4 x 5 1/2 inches)	64 x 57 x 137 mm (2 5/8 x 2 1/4 x 5 1/2 inches)	64 x 57 x 162 mm (2 5/8 x 2 1/4 x 6 1/2 inches)

B/W CCD Cameras

	SSC-M383CE	SSM-M388CE	SSC-M183CE	SSC-M188CE
Pickup device	1/3 type Interline Transfer CCD with Exwave HAD technology	1/3 type Interline Transfer CCD with Exwave HAD technology	1/3 type Interline Transfer Super HAD CCD	1/3 type Interline Transfer Super HAD CCD
Picture Elements (HxV)	752 x 582	752 x 582	500 x 582	500 x 582
Lens mount	CS	CS	CS	CS
Signal system	CCIR	CCIR	CCIR	CCIR
Sync system	Internal/External	External	Internal/External	External
External sync	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)
V-phase control	±90°	±90°	±90°	±90°
H-Phase control	–	–	–	–
Horizontal resolution	570 TV lines	570 TV lines	380 TV lines	380 TV lines
S/N ratio (AGC OFF)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (AGC, ON)	0.04 lx at F1.2 (30 IRE) 0.07 lx at F1.2 (50 IRE) 0.3 lx at F1.2 (100 IRE)	0.04 lx at F1.2 (30 IRE) 0.07 lx at F1.2 (50 IRE) 0.3 lx at F1.2 (100 IRE)	0.03 lx at F1.2 (30 IRE) 0.06 lx at F1.2 (50 IRE) 0.25 lx at F1.2 (100 IRE)	0.03 lx at F1.2 (30 IRE) 0.06 lx at F1.2 (50 IRE) 0.25 lx at F1.2 (100 IRE)
Backlight compensation	ON/OFF switchable	ON/OFF switchable	ON/OFF switchable	ON/OFF switchable
Video output	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)
Power requirements	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50 Hz	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50 Hz
Power consumption	2.6 W	2.6 W	2.5 W	2.5 W
Mass	360 g (13 oz)	390 g (14 oz)	360 g (13 oz)	390 g (14 oz)
Dimensions (WxHxD)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)	60 x 54 x 120 mm (2 3/8 x 2 1/4 x 4 3/4 inches)

Vari-focal Lens Cameras

	SSC-CX13VP	SSC-CX18VP	SSC-MX13VCE	SSC-MX18VCE
Pickup device	1/4 type Interline Transfer Super HAD CCD	1/4 type Interline Transfer Super HAD CCD	1/4 type Interline Transfer Super HAD CCD	1/4 type Interline Transfer Super HAD CCD
Picture elements (HxV)	752 x 582	752 x 582	752 x 582	752 x 582
Built-in lens	Vari-focal lens f=2.8 to 5.8 mm, F1.4 Auto iris	Vari-focal lens f=2.8 to 5.8 mm, F1.4 Auto iris	Vari-focal lens f=2.8 to 5.8 mm, F1.4 Auto iris	Vari-focal lens f=2.8 to 5.8 mm, F1.4 Auto iris
View angle	W=95.7° (D), 75.9° (H), 56.4° (V) T=47.3° (D), 37.8° (H), 28.4° (V)	W=95.7° (D), 75.9° (H), 56.4° (V) T=47.3° (D), 37.8° (H), 28.4° (V)	W=95.7° (D), 75.9° (H), 56.4° (V) T=47.3° (D), 37.8° (H), 28.4° (V)	W=95.7° (D), 75.9° (H), 56.4° (V) T=47.3° (D), 37.8° (H), 28.4° (V)
Minimum object distance	0.2 m	0.2 m	0.2 m	0.2 m
White balance	ATW	ATW	–	–
Signal system	PAL	PAL	CCIR	CCIR
Sync system	Internal/External	Internal/External	Internal/External	Internal/External
External sync	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 220 to 240 V)
V-phase control	±90°	±90°	±90°	±90°
Horizontal resolution	480 TV lines	480 TV lines	570 TV lines	570 TV lines
S/N ratio (AGC OFF, weight ON)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (Turbo AGC ON)	1.1 lx at F1.4 (30 IRE) 1.8 lx at F1.4 (50 IRE)	1.1 lx at F1.4 (30 IRE) 1.8 lx at F1.4 (50 IRE)	0.2 lx at F1.4 (30 IRE) 0.3 lx at F1.4 (50 IRE)	0.2 lx at F1.4 (30 IRE) 0.3 lx at F1.4 (50 IRE)
AGC	Turbo AGC (up to 24 dB)/ Normal AGC (up to 18 dB) switchable	Turbo AGC (up to 24 dB)/ Normal AGC (up to 18 dB) switchable	Turbo AGC (up to 24 dB)/ Normal AGC (up to 18 dB) switchable	Turbo AGC (up to 24 dB)/ Normal AGC (up to 18 dB) switchable
Iris control mode	Auto iris lens	Auto iris lens	Auto iris lens	Auto iris lens
Video output	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Operating humidity	20% to 80% (non condensing)	20% to 80% (non condensing)	20% to 80% (non condensing)	20% to 80% (non condensing)
Power requirements	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50 Hz	AC 24 V, 50 Hz/DC 12 V	AC 220 to 240 V, 50 Hz
Power consumption	3.0 W	2.8 W	1.8 W	2.0 W
Mass	Approx 250 g (8.2 oz)	Approx 250 g (8.2 oz)	Approx 250 g (8.2 oz)	Approx 250 g (8.2 oz)
Dimensions (WxHxD)	58 x 54 x 133 mm (2 3/8 x 2 1/8 x 5 1/4 inches)	58 x 54 x 133 mm (2 3/8 x 2 1/8 x 5 1/4 inches)	58 x 54 x 133 mm (2 3/8 x 2 1/8 x 5 1/44 inches)	58 x 54 x 133 mm (2 3/8 x 2 1/8 x 5 1/44 inches)

SPECIFICATIONS

Fixed Mini Dome Cameras

	SSC-CD73VP	SSC-CD43VP	SSC-MD53VCE	SSC-MD33VCE
Pickup device	1/4 type Interline Transfer Super HAD CCD	1/4 type Interline Transfer Super HAD CCD	1/4 type Interline Transfer Super HAD CCD	1/4 type Interline Transfer Super HAD CCD
Picture elements (HxV)	752 x 582	752 x 582	752 x 582	752 x 582
Built-in lens	CS-mount, Vari-focal lens f=3.0 to 8 mm, F1.0 Auto iris	CS-mount, Vari-focal lens f=3.0 to 8 mm, F1.0 Auto iris	Vari-focal lens f=2.8 to 5.8 mm, F1.4 Auto iris	Vari-focal lens f=2.8 to 5.8 mm, F1.4 Auto iris
View angle	W=84.6° (D), 66.6° (H), 49.3° (V) T=33.8° (D), 27° (H), 20.2° (V)	W=84.7° (D), 66.6° (H), 49.3° (V) T=33.6° (D), 26.9° (H), 20.1° (V)	W=95.7° (D), 75.9° (H), 56.4° (V) T=47.3° (D), 37.8° (H), 28.4° (V)	W=95.7° (D), 75.9° (H), 56.4° (V) T=47.3° (D), 37.8° (H), 28.4° (V)
Minimum object distance	0.2 m	0.2 m	0.2 m	0.2 m
Signal system	PAL	PAL	CCIR	CCIR
White balance	ATW	ATW	–	–
Sync system	Internal/External	Internal/External	Internal/External	Internal/External
External sync	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 24 V)	AC Line Lock (for AC 24 V)
V-phase control	±90°	±90°	±90°	±90°
Horizontal resolution	480 TV lines	480 TV lines	570 TV lines	570 TV lines
S/N ratio (AGC OFF, weight ON)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (Turbo AGC ON, Clear Cover)	0.9 lx (colour)/0.2 lx (B/W) at F1.0 (50 IRE)	0.8 lx at F1.0 (50 IRE)	0.2 lx at F1.4 (30 IRE) 0.4 lx at F1.4 (50 IRE)	0.2 lx at F1.4 (30 IRE) 0.4 lx at F1.4 (50 IRE)
AGC	TURBO AGC (up to 24 dB)/ OFF switchable	TURBO AGC (up to 24 dB)/ OFF switchable	Turbo AGC (up to 24 dB)/ Normal AGC (up to 18 dB) switchable	Turbo AGC (up to 24 dB)/ Normal AGC (up to 18 dB) switchable
Iris control mode	Auto iris lens	Auto iris lens	Auto iris lens	Auto iris lens
Video output	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)	Composite, BNC (1)
Weather proof	IP66	–	IP66	–
Operating temperature	-20 °C to +50 °C (-4 °F to +122 °F)	-20 °C to +50 °C (-4 °F to +122 °F)	-20 °C to +50 °C (-4 °F to +122 °F)	-20 °C to +50 °C (-4 °F to +122 °F)
Operating humidity	20% to 80% (non condensing)	20% to 80% (non condensing)	20 to 80% (non condensing)	20 to 80% (non condensing)
Power requirements	AC 24 V/DC 12 V	AC 24 V/DC 12 V	AC 24 V/DC 12 V	AC 24 V/DC 12 V
Power consumption	3.6 W	3.3 W	2.3 W	2.3 W
Mass	1.2 kg (2 lb 10 oz)	440 g (16 oz)	Approx 870 g (1lb 14 oz)	Approx 320 g (11 oz)
Dimensions (WxHxD)	147 x 111 x 148 mm (5 7/8 x 4 3/8 x 5 7/8 inches)	121 x 106 x 123 mm (4 7/8 x 4 3/8 x 5 7/8 inches)	137 x 105 x 138 mm (5 1/2 x 4 1/4 x 5 1/2 inches)	117 x 95 x 118 mm (4 5/8 x 3 3/4 x 4 3/4 inches)

Camera Adaptors

	YS-W270P	YS-W170P
Video output	BNC (8), composite video	BNC (2), composite video
Video input	Camera In, BNC (4)	Camera In, BNC (1)
External sync	VS or VD-W	VS or VD-W
Internal sync	MPX-VS or MPX-VD-W	MPX-VS or MPX-VD-W
Max. cable length	300 m using RG-59B/U 500 m using RG-6A/U 600 m using RG-11A/U	300 m using RG-59B/U 500 m using RG-6A/U 600 m using RG-11A/U
Cable compensation	3-Position	3-Position
Power requirements	AC 220 to 240 V, 50 Hz	AC 220 to 240 V, 50 Hz
Power consumption	49.5 W	15 W
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Mass	3.6 kg (7 lb 15 oz)	1.9 kg (4 lb 3 oz)
Dimensions (WxHxD)	424 x 52 x 345 mm (16 3/4 x 2 1/8 x 13 5/8 inches)	212 x 52 x 345 mm (8 3/8 x 2 1/8 x 13 5/8 inches)

Video Network Station

		SNT-V304
Video inputs		VBS/VS, BNC type (4), Auto sensing for NTSC or PAL with 75 Ω termination on/off dip-switch S-Video, S terminal connector (1) Alternative VIDEO 1
Serial port		RS-232C, D-sub 9 pin (2) COM 1:EVI-D30/D31, camera control HSR-2P digital recorder control COM 2:EVI-D30/D31, camera control Modem port
Alarm inputs		Terminal connector (4), positive ON/negative ON
Alarm outputs		Terminal connector (1), Relay out
Ethernet connector		RJ45 (1), 100Base-TX/10Base-T Ethernet
Compression method		JPEG
Maximum performance	NTSC	30 fps (352 x 240 resolution) 3 fps (704 x 480 resolution)
	PAL	25 fps (352 x 288 resolution) 2 fps (704 x 576 resolution)
Bandwidth control		0.1 to 2.0 Mbps or Unlimited
Camera view modes		Full size (352 x 240/NTSC, 352 x 288/PAL) Huge size (704 x 480/NTSC, 704 x 576/PAL)
Sequence dwell time		5 to 30 seconds, 1 second steps
Alarm Activation		Relay out e-mail (SMTP) or forward to server (FTP)
Alarm dwell time		1 to 30 seconds or manual reset
Alarm image size		Full size (352 x 240/NTSC, 352 x 288/PAL)
Buffering interval time		10, 5, 4, 3, 2, 1, 1/2, 1/3, 1/4, 1/5 s
Power requirements		AC 12 V, 5.5 W (with supplied AC adaptor)
Mass		0.8 kg (1 lb 12 oz) (not including AC adaptor)
Dimensions (WxHxD)		146 x 41.5 x 223.5 mm (5 3/4 x 1 11/16 x 8 7/8 inches)

Colour Monitors

	SSM-20L1	SSM-14L1
CRT type	20-inch Trinitron	14-inch Trinitron
AG pitch	0.4 mm	0.25 mm
Colour system	NTSC, PAL	NTSC, PAL
Horizontal resolution	600 TV lines	600 TV lines
Video input	Analogue composite (BNC x 2), Y/C (Mini DIN 4-pin x 2)	Analogue composite (BNC x 2), Y/C (Mini DIN 4-pin x 2)
Video output	Analogue composite (BNC x 1), Y/C (Mini DIN 4-pin x 1)	Analogue composite (BNC x 1), Y/C (Mini DIN 4-pin x 1)
Audio input	Phono x 2	Phono x 2
Audio output	Phono x 1	Phono x 1
Built-in speaker	Yes (0.5 W)	Yes (0.5 W)
Power requirements	AC 100 V to 240 V, 50/60 Hz	AC 100 V to 240 V, 50/60 Hz
Power consumption	75 W (typical)	68 W (typical)
Mass	Approx. 28 kg (61 lb 12 oz)	Approx. 15 kg (33 lb 1 oz)
Dimensions (WxHxD)	Approx. 449 x 441 x 502 mm (17 3/4 x 17 3/8 x 19 7/8 inches)	Approx. 346 x 340 x 414 mm (13 5/8 x 13 1/2 x 16 3/8 inches)

SPECIFICATIONS

Digital Hard Disk Video Recorders

	HSR-X200P	HSR-X209P
HDD capacity	80 GB HDD unit (up to 240 GB)	320 GB HDD unit
Playback during recording	Yes	Yes
Video signal	CCIR standard, PAL colour	CCIR standard, PAL colour
Sampling frequency	13.5 MHz (4:2:2 components)	13.5 MHz (4:2:2 components)
Recording/playback time	Max. 671 hours (Approx. 28 days) in High mode, 1 fps	Max. 2686 hours (Approx. 112 days) in High mode, 1 fps
Video input	VBS, VS (BNC type): 1.0 Vp-p, 75 Ω, unbalanced S-VIDEO (DIN 4-pin)	VBS, VS (BNC type x 9): 1.0 Vp-p,75 Ω, unbalanced
Video output	VBS, VS (BNC type): 1.0 Vp-p, 75 Ω, unbalanced S-VIDEO (DIN 4-pin)	VBS, VS (BNC type x 9): 1.0 Vp-p,75 Ω, unbalanced
Split screen display	–	4 patterns
Quality mode	Hyper, Super, High, Middle and Low modes (selectable)	Hyper, Super, High, Middle and Low modes (selectable)
Horizontal resolution	More than 500 TV lines (Hyper mode)	More than 500 TV lines (Hyper mode)
S/N ratio	48 dB (typical)	48 dB (typical)
Mass	5.5 kg (12 lb 2 oz)	7.0 kg (15 lb 7 oz)
Dimensions (W x H x D)	420 x 96 x 376 mm (16 5/8 x 3 7/8 x 14 7/8 inches)	420 x 96 x 376 mm (16 5/8 x 3 7/8 x 14 7/8 inches)
Power requirements	AC 220 to 240 V (50/60 Hz)	AC 220 to 240 V (50/60 Hz)
Power consumption	30 W	37 W
Operating temperature	5 to 40 °C (41 to 104 °F)	5 to 40 °C (41 to 104 °F)
Parallel input/output connectors	D-SUB 9-pin (1) 11 terminals (Alarm terminals) 11 terminals (Control terminals)	D-SUB 9-pin (1) 11 terminals (Alarm terminals) 11 terminals (Control terminals)
Control S connector	Stereo mini (1)	Stereo mini (1)

	HSR-X216P	HSR-2P
HDD capacity	320 GB HDD unit	More than 60 GB
Playback during recording	Yes	Yes
Video signal	CCIR standard, PAL colour	CCIR standard, PAL colour
Recording system	–	Rotary two-head helical scanning system
Sampling frequency	13.5 MHz (4:2:2 components)	13.5 MHz (4:2:0 components)
Recording/playback time	Max. 2686 hours (Approx. 112 days) in High mode, 1 fps	Max. 9999 hours (Approx. 400 days)
Fast forward/rewind time	–	Less than 3 min. (with a 270-minute tape)
Video input	VBS, VS (BNC type x 16): 1.0 Vp-p,75 Ω, unbalanced	VBS, VS (BNC type) : 1.0 Vp-p, 75 Ω, unbalanced
Video output	VBS, VS (BNC type x 16): 1.0 Vp-p,75 Ω, unbalanced	VBS (BNC type): 1.0 Vp-p, 75 Ω, unbalanced S-VIDEO (DIN 4-pin)
Split screen display	6 patterns	9 patterns
Quality mode	Hyper, Super, High, Middle and Low modes (selectable)	Super, High, Middle and Low modes (selectable)
Horizontal resolution	More than 500 TV lines (Hyper mode)	More than 500 TV lines (Hyper and Super modes) 360 TV lines (High mode)
S/N ratio	48 dB (typical)	48 dB (typical)
Mass	7.0 kg (15 lb 7 oz)	10 kg (22 lb 1 oz)
Dimensions (WxHxD)	420 x 96 x 376 mm (16 5/8 x 3 7/8 x 14 7/8 inches)	355 x 125 x 410 mm (14 x 5 x 16 1/4 inches)
Power requirements	AC 220 to 240 V (50/60 Hz)	AC 220 to 240 V (50/60 Hz)
Power consumption	38 W	58 W (without options), 78 W (with full options)
Operating temperature	5 to 40 °C (41 to 104 °F)	5 to 40 °C (41 to 104 °F)
Recording/back-up media	–	DV or DVCAM cassette tape (standard size, mini size)
Parallel input/output connectors	D-SUB 9-pin (1) 17 terminals (Alarm terminals) 17 terminals (Control terminals)	D-SUB 37-pin (1) 24 terminals (Input), 8 terminals (Output) to be freely assigned (Alarm, Rec. Tally, Clock set, Series rec. etc.) Power output: +12 V (max. 100 mA)
Control S connector	Stereo mini (1)	Stereo mini (1)

Analogue Time Lapse Video Recorders

	SVT-RA96P	SVT-N72P	SVT-N24P
Tape format	VHS	VHS	VHS
Tape speed	11.70 mm/s (6 or 8-hour mode)	23.39 mm/s (3-hour mode)	23.39 mm/s (3-hour mode)
Fast forward/rewind time	Approx. 100 seconds (with an E-180 tape)	Approx. 100 seconds (with an E-180 tape)	Approx. 100 seconds (with an E-180 tape)
Recording system	Rotary four-head helical scanning system	Rotary four-head helical scanning system	Rotary four-head helical scanning system
Video input	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced
Video output	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced
Recording modes	6 to 96 hours (with an E-180 tape) 8 to 128 hours (with an E-240 tape)	3 to 72 hours (with an E-180 tape)	3, 12, 24 hours (with an E-180 tape)
Record interval (Approx.)	1/50 to 0.34 s	1/50 to 0.5 s	1/50 to 0.18 s
Mic input	ϕ 3.5 mm Mini-jack, -60 dB, 600 Ω	ϕ 3.5 mm Mini-jack, -60 dB, 600 Ω	ϕ 3.5 mm Mini-jack, -60 dB, 10 kΩ
Audio recording	6 (8), 18 (24), 30 (40) hour mode	3, 12, 24 hour mode	3, 12, 24 hour mode
Audio input	-8 dB, 27 kΩ (phono jack)	-8 dB, 27 kΩ (phono jack)	-8 dB, 27 kΩ (phono jack)
Audio output	-8 dB, 600 Ω (phono jack)	-8 dB, 600 Ω (phono jack)	-8 dB, 600 Ω (phone jack)
Audio S/N ratio	40 dB	43 dB	40 dB
Horizontal resolution	350 TV lines (B/W), 240 TV lines (Colour)	350 TV lines (B/W), 240 TV lines (Colour)	350 TV lines (B/W), 240 TV lines (Colour)
S/N ratio	42 dB	44 dB	44 dB
Remote control interface	ϕ 3.5 mm Mini-jack RS-232C/485 interface (option)	ϕ 3.5 mm Mini-jack RS-232C/485 interface (option)	ϕ 3.5 mm Mini-jack
Time/date	Yes	Yes	Yes
Built-in timer	7-Day/8-Event	7-Day/8-Event	7-Day/8-Event
Alarm input	Low level	Low level	Low level
Alarm output	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)
Alarm REC. speed	6, 18, 30 hours or No change (E-180 tape) 8, 24, 40 hours or No change (E-240 tape)	3, 12, 24 hours or No change	3, 12, 24 hours or No change
Alarm search	Yes	Yes	Yes
Alarm scan	Yes	Yes	Yes
Alarm data list	Yes	Yes	Yes
Video loss alert	Yes	Yes	Yes
Operating temperature	5 to 40 °C (41 to 104 °F)	5 to 40 °˚C (41 to 104 °F)	5 to 40 °C (41 to 104 °F)
Power requirements	AC 220 to 240 V, 50 Hz	AC 220 to 240 V, 50 Hz	AC 220 to 240 V, 50 Hz
Power consumption	16 W	14 W	14 W
Mass	4.1 kg (9 lb)	4.1 kg (9 lb)	3.8 kg (8 lb 6 oz)
Dimensions (WxHxD)	420 x 100 x 300 mm (16 5/8 x 4 x 11 7/8 inches)	420 x 100 x 300 mm (16 5/8 x 4 x 11 7/8 inches)	240 x 100 x 335 mm (9 1/2 x 4 x 13 1/4 inches)

SPECIFICATIONS

Multiplexers

	YS-DX516P	YS-DX416CE	YS-DX504P
Multiplexer type	Duplex colour	Duplex B/W	Half Duplex Colour
No. of video inputs	16	16	4
Video signal	PAL colour	CCIR B/W	PAL colour
Video input	BNC (16) composite video	BNC (16) composite video	BNC (4) composite video
VCR input	BNC (1) composite video 4-pin Mini DIN (1), Y/C	BNC (1) composite video	BNC (1) composite video 4-pin Mini DIN (1), Y/C
VCR output	BNC (1) composite video 4-pin Mini DIN (2), Y/C	BNC (1) composite video	BNC (1) composite video 4-pin Mini DIN (1), Y/C
Resolution	720 (H) x 564 (V) pixels	720 (H) x 564 (V) pixels	720 (H) x 564 (V) pixels
Monitor outputs	BNC (2), composite video	BNC (2), composite video	BNC (2), composite video
Digital still/zoom	Yes, 2x zoom	Yes, 2x zoom	Yes, 2x zoom
Alarm input	16	16	4
External alarm output	1	1	1
Sensor alarm output	16	16	4
Video loss alert	Yes	Yes	Yes
Battery backup	30 days	30 days	30 days
Power requirements	AC 220 to 240 V, 50 Hz	AC 220 to 240 V, 50 Hz	AC 220 to 240 V, 50 Hz
Power consumption	21 W	18 W	19 W
Operating temperature	5 to 40 °C (37 to 104 °F)	5 to 40 °C (37 to 104 °F)	5 to 40 °C (37 to 104 °F)
Mass	4.1 kg (9 lb 4 oz)	4.1 kg (9 lb 4 oz)	3.4 kg (7 lb 8 oz)
Dimensions (WxHxD)	420 x 86 x 325 mm (16 5/8 x 3 1/2 x 12 7/8 inches)	420 x 86 x 325 mm (16 5/8 x 3 1/2 x 12 7/8 inches)	420 x 44 x 325 mm (16 5/8 x 1 3/4 x 12 7/8 inches)

Colour Video Printers

	UP-51MD	UP-20
Printing method	Dye sublimation printing	Dye sublimation printing
Resolution	Approx. 300 dpi (2048 dots)	403 dpi (1664 dots)
Gradations	256 gradations for Yellow, Magenta, Cyan Approx. 16.7 million colours per dot	256 gradations for Yellow, Magenta, Cyan Approx. 16.7 million colours per dot
Effective print pixels	1,176 x 1,920 dots	S size 1,524 x 1,176 dots L size 2,032 x 1,458 dots
Paper size	A5 size 148 x 210 mm (5 7/8 x 8 3/8 inches)	A6 S size 100 x 90 mm (4 x 3 5/8 inches) A6 L size 144 x 100 mm (5 3/4 x 4 inches)
Print area	124.8 x 165.1 mm (5 x 6 1/2 inches) — Full 117.0 x 170.9 mm (4 3/5 x 6 3/4 inches) —2 Splits 126.9 x 167.1 mm (5 x 6 1/2 inches) — 4 Splits 119.0 x 170.9 mm (4 2/3 x 6 3/4 inches) — 8 Splits 127.4 x 165.1 mm (5 x 6 1/2 inches) —16 Splits	S size 95.8 x 72.7 mm (3 7/8 x 2 7/8 inches) - Full 68.3 x 47.7 mm (2 3/4 x 1 15/16 inches) - 2 Splits L size 126.9 x 91.9 mm (5 x 3 5/8 inches) - Full 87.7 x 63.4 mm (3 1/2 x 2 1/2 inches)- 2 Splits 63.5 x 45.9 mm (2 1/2 x 1 13/16 inches) - 4 Splits
Printing time (High-speed mode)	UPC-510 approx. 22 s UPC-540 approx. 33 s	UPC-21S approx. 17 s UPC-21L approx. 25 s
Picture memory	Eight frame memories	Four frame memories
Inputs/Outputs	Video, S-Video, RGB	Video, S-Video
Control terminals	Remote 1 (special mini) for optional RM-5500, RM-91 RS-232C interface port (D-sub 25-pin) for external computer	Remote 1 (special mini) for optional RM-5500 Remote 2 (stereo mini) for optional RM-91 RS-232C interface port (D-sub 25-pin) for external computer
Paper tray capacity	Max. 100 sheets	S size tray : Max. 80 sheets L size tray : Max. 50 sheets
Power requirements	AC 220 to 240 V, 50/60 Hz	AC 220 to 240 V, 50/60 Hz
Power consumption	Max. 1.2 A	1.0 A
Mass	Approx.14 kg (31 lb)	Approx. 6.5 kg (14 lb 5 oz)
Dimensions (WxHxD)	370 x 125 x 475 mm (14 5/8 x 5 x 18 3/4 inches)	212 x 125 x 395 mm (8 3/8 x 5 x 15 5/8 inches)
Print paper	UPC-510 Colour Printing Pack (for 200 prints) UPC-540 Self-laminating Colour Printing Pack (for 102 prints)	UPC-21S Small Size Colour Print Pack (for 240 prints) UPC-21L Large Size Colour Print Pack (for 200 prints)

	UP-21MD
Printing method	Dye sublimation printing
Resolution	403 dpi (1664 dots)
Gradations	256 gradations for Yellow, Magenta, Cyan Approx. 16.7 million colours per dot
Effective print pixels	S size 1,524 x 1,176 dots L size 1,524 x 1,458 dots
Paper size	A6 S size 100 x 90 mm (4 x 3 5/8 inches) A6 L size 144 x 100 mm (5 3/4 x 4 inches)
Print area	S size 95.8 x 72.7 mm (3 7/8 x 2 7/8 inches) - Full 68.3 x 47.7 mm (2 3/4 x 1 7/8 inches) - 2 Splits L size 126.9 x 91.9 mm (5 x 3 5/8 inches) - Full 87.7 x 63.4 mm (3 1/2 x 2 1/2 inches)- 2 Splits 63.5 x 45.9 mm (2 1/2 x 1 13/16 inches) - 4 Splits
Printing time (High-speed mode)	UPC-21S approx. 17 s UPC-21L approx. 25 s
Picture memory	Four frame memories
Inputs/Outputs	Video, S-Video, RGB
Control terminal	Remote 1 (special mini) for optional RM-5500 Remote 2 (stereo mini) for optional RM-91 RS-232C interface port (D-sub 25-pin) for external computer
Paper tray capacity	S size tray : Max. 80 sheets L size tray : Max. 50 sheets
Power requirements	AC 220 to 240 V, 50/60 Hz
Power consumption	1.0 A
Dimensions (WxHxD)	212 x 125 x 395 mm (8 3/8 x 5 x 15 5/8 inches)
Mass	Approx. 6.5 kg (14 lb 5 oz)
Print paper	UPC-21S Small Size Colour Print Pack (for 240 prints) UPC-21L Large Size Colour Print Pack (for 200 prints)

SPECIFICATIONS

Digital Colour Printer

	UP-D23MD
Printing method	Dye sublimation printing
Resolution	403 dpi (1664 dots)
Gradations	256 gradations for Yellow, Magenta, Cyan Approx. 16.7 million colours per dot
Effective print pixels	S size 1,520 x 1,144 dots L size 2,000 x 1,520 dots
Paper size	A6 S size 100 x 90 mm (4 x 3 5/8 inches) A6 L size 144 x 100 mm (5 3/4 x 4 inches)
Print area	S size 95.8 x 72.1 mm (3 7/8 X 2 7/8 inches) L size 126 x 95.8 mm (5 x 3 7/8 inches)
Printing time (High-speed mode)	UPC-21S approx. 19 s UPC-21L approx. 29 s
Picture memory	18 MB (Two frame memories)
Inputs/Outputs	–
Control terminal	USB interface port (Rev. 2.0)
Print Media capacity	S size tray : Max. 80 sheets L size tray : Max. 50 sheets
Power requirements	AC 220 to 240 V, 50/60 Hz
Power consumption	1.0 A
Mass	Approx. 6.5 kg (14 lb 5 oz)
Dimensions (WxHxD)	212 x 125 x 395 mm (8 3/8 x 5 x 15 5/8 inches)
Print paper	UPC-21S Colour Print Pack (for 240 prints) UPC-21L Colour Print Pack (for 200 prints)

B/W Video Graphic Printers

	UP-960CE	UP-895CE
Printing method	Direct thermal printing	Direct thermal printing
Thermal head	162 dpi	325 dpi
Gradation	256 grey levels	256 grey levels
Effective print pixels	(EIA) 1280 x 507 dots (CCIR) 1280 x 607 dots	(EIA) NORMAL: 1150 dots x 472 lines WIDE1: 1210 dots x 490 lines WIDE2: 1280 dots x 508 lines (CCIR) NORMAL: 1150 dots x 560 lines WIDE1: 1210 dots x 582 lines WIDE2: 1280 dots x 608 lines
Print area	(EIA) Standard mode: 190 x 144 mm (7 1/2 x 5 3/4 inches) Side mode: 184 x 243 mm (7 1/4 x 9 5/8 inches) (CCIR) Standard mode: 190 x 142 mm (7 1/2 x 5 5/8 inches) Side mode: 181 x 243 mm (7 1/4 x 9 5/8 inches)	(EIA) NORMAL: 90 x 69 mm (3 5/8 x 2 3/4 inches) WIDE1: 94 x 72 mm (3 3/4 x 2 7/8 inches) WIDE2: 100 x 74 mm (4 x 3 inches) (CCIR) NORMAL: 90 x 68 mm (3 5/8 x 2 3/4 inches) WIDE1: 94 x 71 mm (3 3/4 x 2 7/8 inches) WIDE2: 100 x 74 mm (4 x 3 inches)
Printing time	Approx. 12 seconds per screen	Approx. 3.9 seconds per screen (Standard mode and Smoothing off)
Picture memory	2048 x 1024 x 8 bit	800 K x 8 bit for one frame
Inputs/Outputs	Video	Video
Control terminals	Stereo mini	Stereo mini
Power requirements	AC 220 to 240 V, 120 V, 50/60 Hz	AC 100 to 120 V, 220 to 240 V, 50/60 Hz
Power consumption	120 V: 2.4 A, 220 to 240 V: 1.3 A	100 to 120 V: 1.5 A, 220 to 240 V: 0.8 A
Mass	8 kg (17 lb 10 oz)	3.4 kg (7 lb 8 oz)
Dimensions (WxHxD)	316 x 132 x 305 mm (12 1/2 x 5 1/4 x 12 1/8 inches)	154 x 105 x 260 mm (6 1/8 x 4 1/4 x 10 1/4 inches)
Print paper	UPP-210HD Thermal Print Media (Type II: High Density) (210 x 25 m) UPP-210SE Thermal Print Media (Type I: High Quality) (210 x 25 m) RM-91 Remote Control Unit	UPP-110S Thermal Print Media (Type I: High Quality) (110 x 20 m) UPP-110HD Thermal Print Media (Type II: High Density) (110 x 20 m) UPP-110HG Thermal Print Media (Type V: High Glossy) (110 x 18 m) RM-91 Remote Control Unit

All print quantity numbers are measured in default setting.
All non-metric weights and measures are approximate.

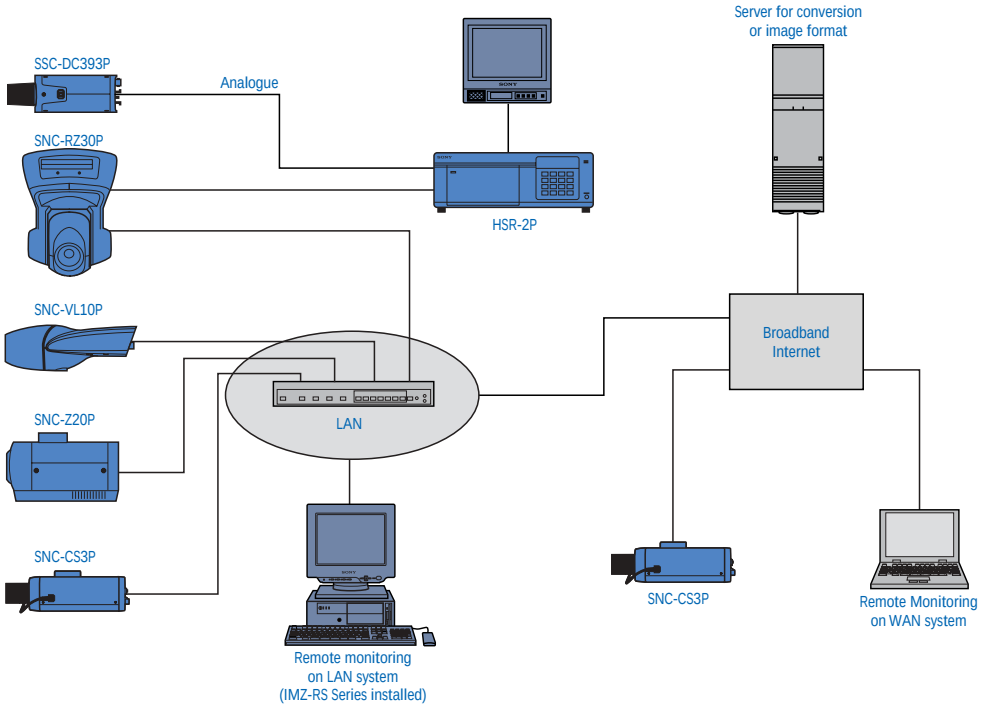
B/W Digital Graphic Printers

	UP-D895
Printing method	Direct thermal printing
Resolution	325 dpi
Gradation	256 gray levels
Effective print pixels	Max. 1280 x 4096 dots
Paper size	–
Print area	Max. 100 x 320 mm (4 x 12 5/8 inches)
Printing times	Approx. 3.9 s (1280 x 960 dots) Approx. 5.1 s (1280 x 1280 dots)
Picture memory	8 MB
Inputs/Outputs	–
Control terminal	Parallel (IEEE 1284) USB (version 1.0)
Paper tray capacity	–
Power requirements	AC 220 to 240 V, 50/60 Hz
Power consumption	Approx. 120 W Approx. 20 W (stand-by mode)
Dimensions (WxHxD)	154 x 105 x 260 mm (6 1/8 x 4 1/4 x 10 1/4 inches)
Mass	Approx. 3.4 kg (7 lb 8 oz)
Driver software	Parallel (IEEE 1284): Windows 95/98/ME/2000, Windows NT 4 USB (version 1.0): Windows 98/ME/2000
Print paper	UPP-110HG Thermal Print Media (Type V:High Glossy) (110 mm x 18 m) UPP-110HD Thermal Print Media (Type VI:Superior Density) (110 mm x 20 m) UPP-110S Thermal Print Media (Type I:High Quality) (110 mm x 20 m)

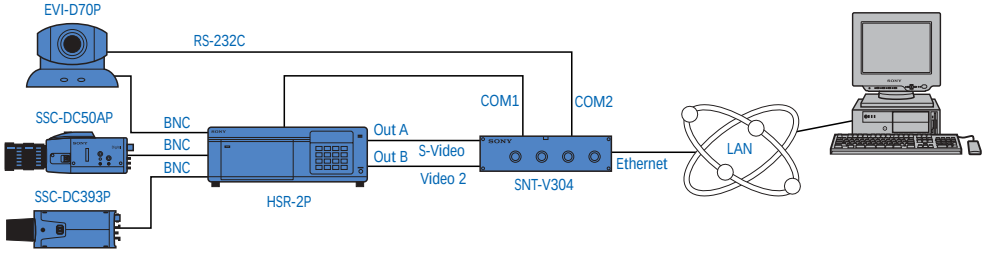
SYSTEM EXAMPLES

Cameras: Typical System

SNC Series Operation



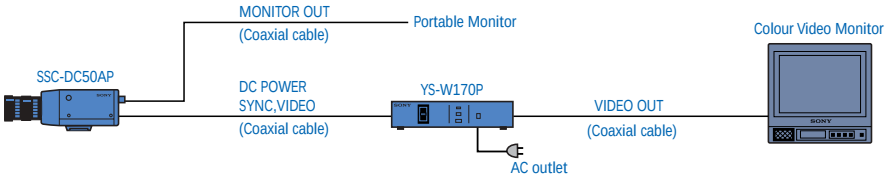
SNT-V304 Operation



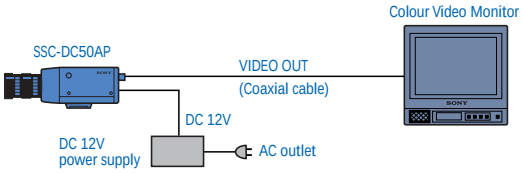
SSC-DC50AP operation

1. Single camera operation

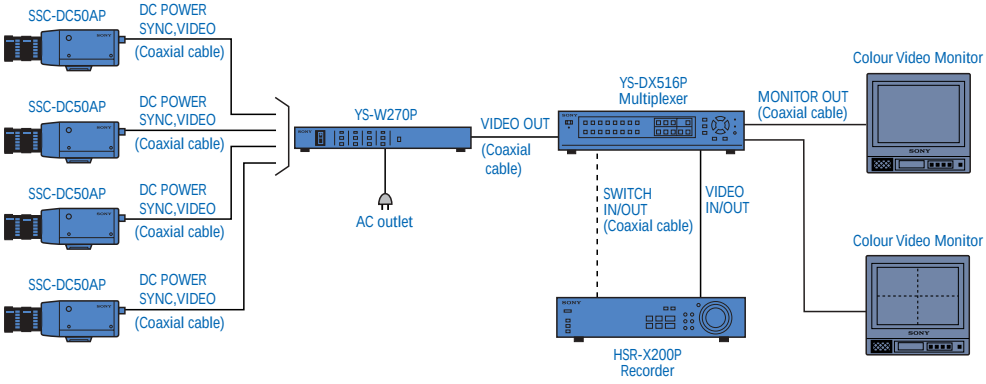
(a) Mode A: Triple multiplexing operation

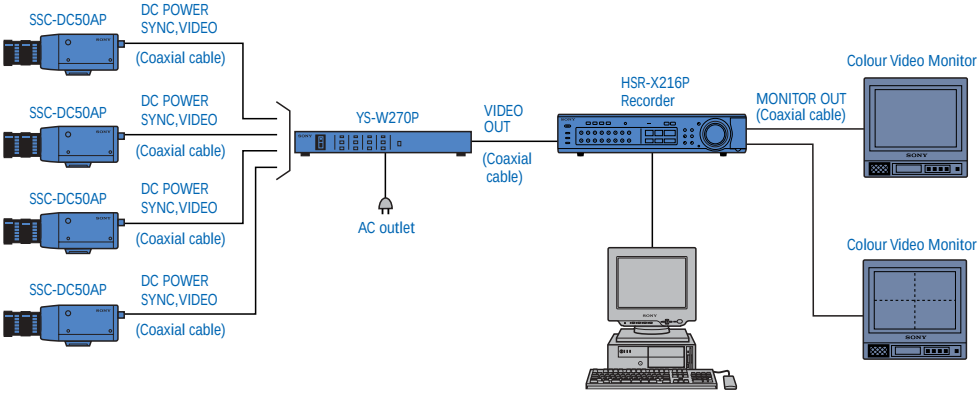


(b) Mode B: DC 12 V operation



2. Multiple camera operation



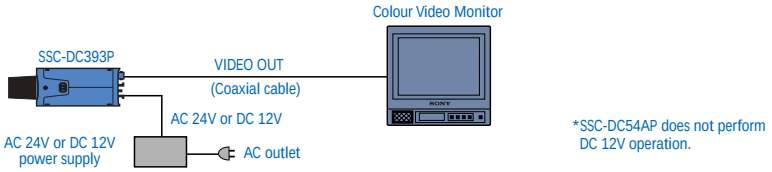


SYSTEM EXAMPLES

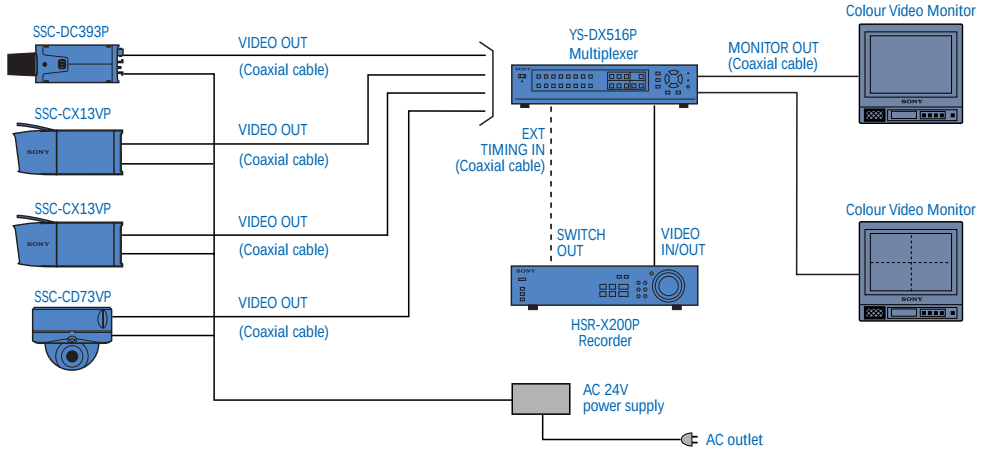
Cameras: Typical System

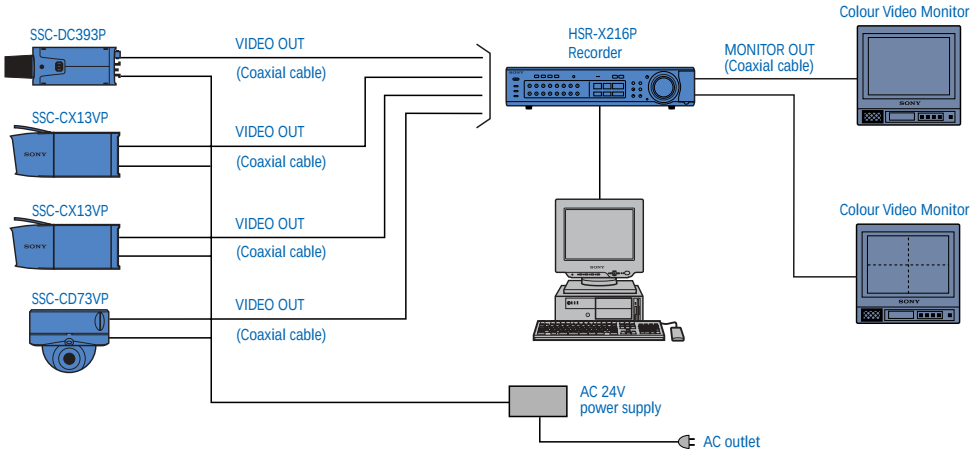
SSC-DC54AP/DC393P/DC193P/DC593P/M383CE/M183CE/CX13VP/MX13VCE/CD73VP/CD43VP/MD53VCE/MD33VCE operation

1. Single camera operation



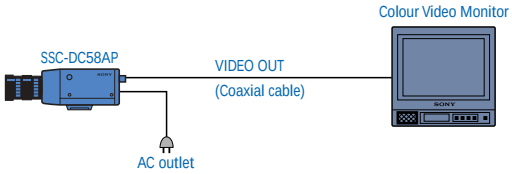
2. Multiple camera operation



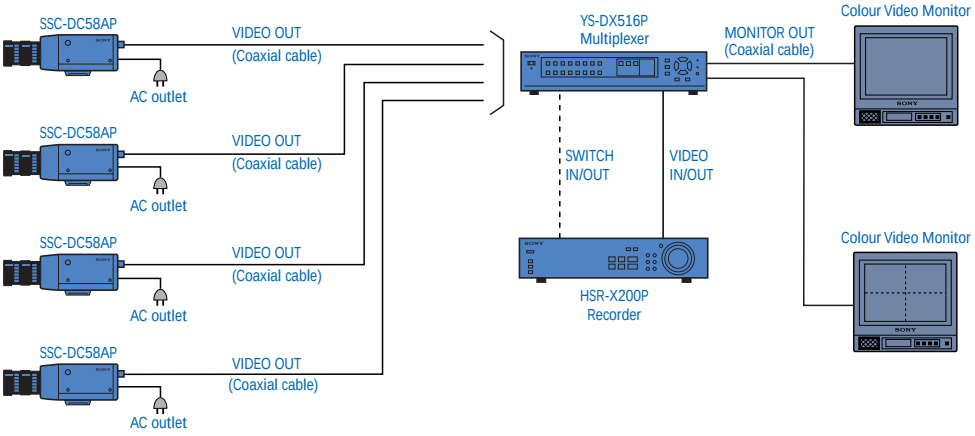


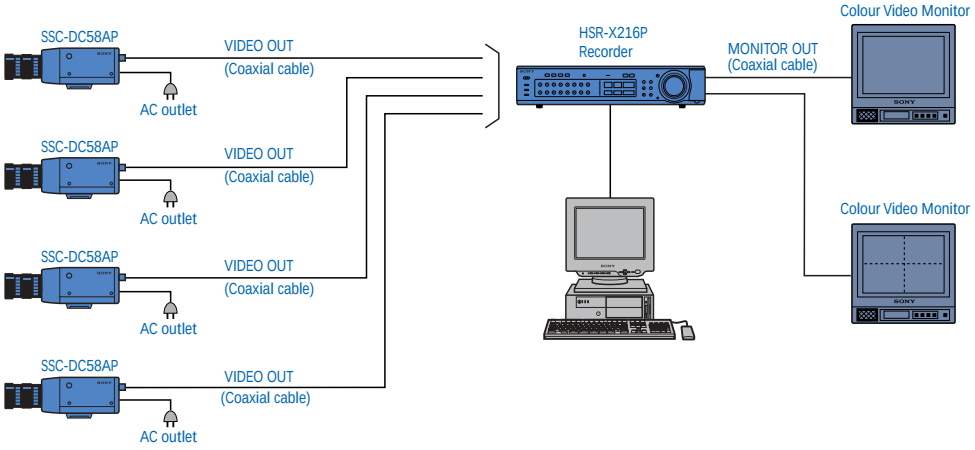
SSC-DC58AP/DC398P/DC198P/DC598P/M388CE/M188CE

1. Single camera operation



2. Multiple camera operation

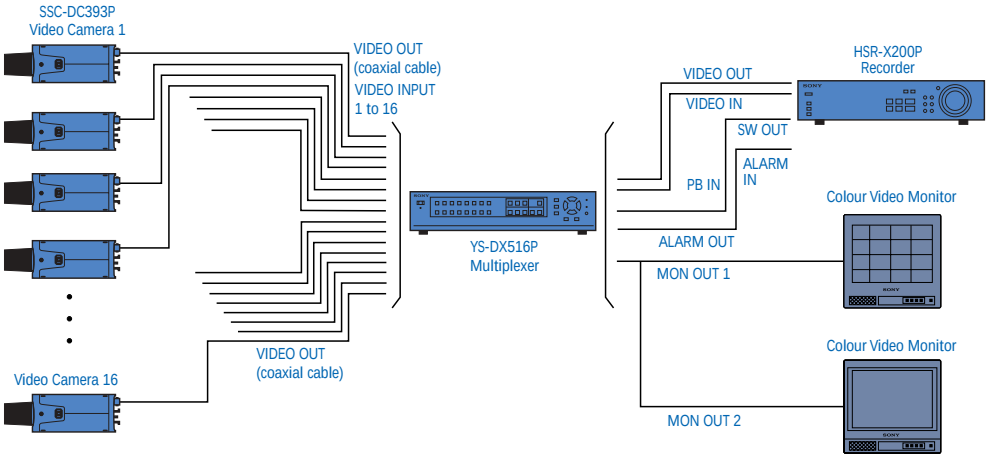




SYSTEM EXAMPLES

Multiplexers: Typical System

Single YS-DX516P/DX416CE/DX504P* operation



*Up to 4 cameras can be connected

GLOSSARY

Automatic Gain Control (AGC)

Amplifies existing video to help camera reproduce a video signal at very low light levels.

Analogue backlight compensation (BLC)

Picture brightness is adjusted automatically depending on lighting conditions. Overcomes the problem of strong backlight which often causes the subject of the picture to be cast into shadow.

Adaptive Picture Control (APC)

Automatically detects the condition of the recording head and video cassette tape and then sets the optimum recording head current. Available on all SVT time lapse VCRs.

Aperture/sharp mode

Makes object outline in the picture appear sharper. Ideal for situations where an object merges into the scene with a similar shade of colour.

Auto Tracing White Balance (ATW)

Adjusts the white balance automatically in response to varying light conditions.

ATW PRO

Ideal for frequently changing light conditions and applications where the operator needs to see objects as they appear to the eye. Effective operational colour range is 2500 to 6000K.

Auto iris

Automatically adjusts the iris element as the light level changes.

Auto White Balance (AWB)

Automatically memorises adjusted white balance values.

Backlight compensation

See Smart Control (Digital)
See Analogue backlight compensation (Analogue)

C mount

Type of camera mount which measures 17.5 mm from the lens rear mounting surface to the camera's CCD.

CS mount

Type of camera mount which measures 12.5 mm from the lens rear mounting surface to the camera's CCD. CS mount lenses can be used with C mount cameras by adding a 5 mm spacer.

DC servo auto iris lens

Lens that relies on DC power from the camera to control the iris.

Digital Signal Processing (DSP)

Converts the analogue signal from a CCD image sensor into a digital signal through an internal A/D converter. The signal is then broken down into luminance and chrominance components for processing, adjustment and feature enhancement enabling many digital features such as backlight compensation.

Duplex

Type of multiplexer allowing simultaneous live monitoring or playback as images are being recorded.

Exwave HAD Technology

Sony's technology with a nearly gap-less OCL (On-chip-lens) located over each pixel on the CCD resulting in more than twice the sensitivity and 1/50 the smear compared to the Hyper HAD technology. Used in SSC-DC50A/DC54A/DC393/M383 cameras.

Hybrid recording

Original Sony recording method of the HSR-2, which uses both a Hard Disk Drive and DV tape. Images are first recorded to HDD, then transferred to DV tape.

Hyper HAD Technology

Technology with an OCL (On-chip-lens) located over each pixel on the CCD which helps increase sensitivity and reduce smear.

Real Action recording

EP recording mode which achieves four times as many frames/s to be recorded in 24 H mode. (SVT-RA168/RA40 only)

Sensitivity

The amount of light falling on a scene measured in lx.

Simplex

Type of multiplexer which allows the user to choose between live monitoring, recording or playback.

Smart Control

Digital circuit within the camera providing automatic backlight compensation by automatically adjusting iris and gain. Also see DSP.

Smear

Vertical streaks above and below a brightly lit object or light source when observed on the monitor. Vertical lines on the screen are caused by the leakage of unwanted light onto the vertical shift register of the CCD.

Super HAD Technology

Improves drastically the sensitivity compared to the Hyper HAD technology by optimizing the shape of on-chip microlenses on the CCD in order to minimize the invalid area between microlenses of each pixel.

Synchronisation

Used in multi-camera installations where automatic switching is employed and allows roll-free switching from camera to camera.

Trinitron CRT

Sony CRT which allows for high resolution and the best possible picture reproduction. The completely flat, straight vertical surface of the Trinitron CRT provides very low purity imperfection.

Triple multiplexing

Video, sync and power transmitted over a single coaxial cable.

Turbo AGC

Powerful automatic gain control function. Increases range of video gain compared to conventional AGC resulting in greater sensitivity.

Video servo auto iris lens

Lens that relies on video input to control the iris opening. When the video level is high, the lens iris closes. When the video level is low, it opens.

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