



**PCS-1P**



## MULTIMEDIA VIDEOCONFERENCING SYSTEM

INDUSTRY'S FIRST HIGH QUALITY MPEG4 AUDIO AND VIDEO CODING

Today, many organisations are facing the same challenges. Gaining competitive edge, increasing efficiency and improving profitability is balanced by the need to manage travel budgets and other overheads more effectively.



That's why corporate companies, educational establishments, scientific institutions and medical practitioners are using videoconferencing to improve their internal as well as external communications – bringing people together to share ideas and make decisions, wherever they are in the world.

The new Sony PCS-1P videoconference system offers everything you need to bring the benefits of high quality video, audio and data conferencing to your organisation.

Elegantly designed and small enough to fit on your desk, the PCS-1P is equally at home in meeting rooms of any size, right up to the largest boardroom. Quick and easy to set up, the PCS-1P plugs into your standard office network, ISDN network or connects to the Internet to deliver all the advantages of audio, video and data conferencing without requiring special cabling or difficult configuration.

The intuitive on screen menu of the PCS-1P makes setting up a conference call as easy as making a normal telephone call; calls to five other parties can be launched instantly from one phonebook entry.

Better still, as your needs grow, it's easy to upgrade the PCS-1P to handle "multipoint" conferences with up to five other participants over IP and ISDN networks simultaneously.

Sparkling picture quality is matched by clear, crisp audio that's the best in its class, making every conference more immediate, personal and productive.

Connect two PCs or notebooks and you can share presentation documents and images as well as voice and video, or hook up a digital whiteboard and communicate your ideas with sketches and handwritten notes that everybody can see and share. Best of all, the PCS-1P is fully compatible with other videoconferencing systems, so it's easy to integrate into your existing IT and networked communications infrastructure.

The Sony PCS-1P – it's the most natural, effective way to help you communicate more effectively... whatever your business is.



## Share your ideas easily

Nothing persuades like the power of the visual image, and any conference can become even more productive with the addition of presentations, documents, pictures and diagrams. With the PCS-1P, it's easy to share presentations and documents created on your PC, or add hand-written notes from a digital whiteboard – it's like giving a presentation to everybody in the same room. The PCS-1P offers two special data sharing features to help get your point across more effectively:

### Present information from your PC instantly

The new generation of multimedia videoconferencing systems from Sony facilitates sharing of high-resolution data from the PC at the touch of a button - irrespective of the number of participants, while retaining full industry-wide interoperability. High resolution XGA display quality ensures that Microsoft® PowerPoint®, Word and Excel files can be viewed with superb clarity, making it easier to read even the smallest on-screen characters. Up to two PCs or notebooks can be connected simultaneously, allowing presenters to switch seamlessly between PCs and transmit screen images at the touch of a button. With two monitors connected, one screen can display data presentations while the other displays video and audio of the presenter. Larger images can be displayed by connection to an external data projector, television or plasma screen.

The Sony CTE-600 Audioconference device can be added to provide every participant in the room with superb quality microphone and loudspeaker audio reproduction. Alternatively, up to five separate microphones can be connected to ensure that every voice in the room is heard clearly.

### Use your existing whiteboard

Further improving the natural interactivity of a face-to-face meeting, an optional Mimio Xi™ connected to the PCS-1P turns your existing whiteboard into a digital one, allowing handwritten notes, drawings and diagrams to be displayed in real time. Notes and other annotations can also be captured by the PCS-1P and stored to Memory Stick™ for sharing, storage or wider distribution.

### Bring the world into your conference

With the unique optional multipoint functionality you can bring up to 6 international locations into one meeting instantly, via IP, ISDN or both networks at the same time. You can even expand the number of locations to an amazing 10 sites, without using an expensive external multipoint solution, just by cascading a second PCS-1P. All participants can be seen on one TV monitor in the unique Sony 5+1 continuous presence mode, while the high resolution data or whiteboard drawings are projected via the second monitor or projector. The high bandwidth of 384 Kbps per site in such a multipoint conference provides excellent audio and video quality.

Even when participants are not near any videoconferencing system they can join the conference: up to 5 participants can join in via their mobile or fixed telephone just as easily.

## **Industry's first high quality MPEG4 coding**

With its unique MPEG4 audio and video coding, the PCS-1P takes the next step in delivering unequalled audio and video quality. Superb audio reproduction is assured by AAC (Advanced Audio Coding) at 14 kHz, compliant with the MPEG-4 standard. Doubling the frequency range of conventional audio conferencing systems, the PCS-1P ensures that every participant can be heard with unprecedented clarity. Equally, MPEG4 coding is able to deliver far better video quality than conventional video coding standards, even at low bit rates.

## **Excellent video quality**

The superb picture encoding capabilities of the PCS-1P comply with ITU-T H.323 standards for network-based videoconferencing at up to 2 Mb/s and 30 frames/s. By connecting the optional PCS-B768 ISDN Unit, it is possible to hold videoconferences compliant with ITU-T H.320 standards at up to 768 kb/s via an ISDN line.

## **Outstanding audio quality**

Clarity of audio is a vital part of any videoconference meeting. The PCS-1P offers outstandingly crisp, clear sound quality to help ensure the success of every videoconference.

## **Super Acoustic System Support**

The optional CTE-600 Audioconference device includes six unidirectional microphones positioned radially to provide 360° coverage around a meeting room, plus an integrated loudspeaker. This ensures that the voice of every speaker in a meeting room is picked up directly from the speaker's mouth and reproduced clearly. Each microphone constantly monitors audio levels in the conference room, but only the loudest microphone source is transmitted at any instant while signals from the other microphones are muted.

This ensures that only the active speaker's voice can be heard clearly by other conference participants, while unwanted background noise is kept to a minimum. Reproduced sound is projected horizontally by the omnidirectional speaker in all directions for improved intelligibility, even in meetings involving as many as 15 to 20 participants.

## **Scalable, flexible design**

The PCS-1P offers a highly scalable, flexible videoconferencing solution to suit the needs of any organisation, from desktop users and smaller meeting rooms right up to large boardrooms. The main Communication Terminal measures a compact 258 x 54 x 171 mm (WxHxD), and can be sited separately from the Camera Unit to ensure greater flexibility in installation and configuration. The Communication Terminal and Camera Unit are together small enough to be positioned on top of a television or video monitor. Alternatively, both units can be mounted on a dedicated camera stand (PCS-STP1) or integrated separately into a meeting room.

## **Ensuring quality on your network**

Maintaining consistent picture and audio quality levels is a common concern when running videoconferences over the Internet and data networks. The PCS-1P offers advanced functions to enhance Quality Of Service and provide a more satisfying, reliable and productive videoconference:

### **Adaptive Rate Control**

The adaptive rate control function varies the bit rate of transmitted audio and video data corresponding to changing network conditions, selecting the most appropriate frame rate at a particular instant. Video bit rates are automatically lowered when network traffic becomes congested, and increased when network performance increases to deliver the best possible conferencing quality at all times.

### **ARQ (Auto Repeat reQuest)**

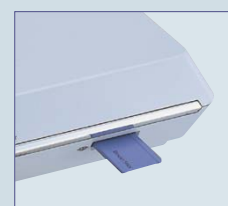
The ARQ function maintains picture quality by buffering and re-sending lost data packets to improve audio and video performance even when network conditions are less than optimal.

## **Keeping confidential information confidential**

The PCS-1P supports the Advanced Encryption Standard (AES) to make sure that confidential information stays secure within your conferences.

## **Unique Memory Stick connectivity**

The PCS-1P is compatible with Memory Stick removable media, making it easy to share a presentation or digital pictures with other participants in a conference. You don't even need to connect a PC: simply slip in a Memory Stick and the PCS-1P will transmit files in standard 4CIF resolution to other conference participants. Memory Stick also allows you to upload system updates or address books.



## System Components



Camera unit



Communication terminal



Remote commander

## Optional Accessories



### PCS-DSB1

Data Solution Box

Dimensions:  
240 (W) x 33 (H) x 160 (D) mm  
Mass: 0.85 kg



### PCS-STP1

Camera Stand

Dimensions:  
386 (W) x 1170 (H) x 386 (D) mm  
Mass: 13.0 kg



### CTE-600

Audioconference  
Device

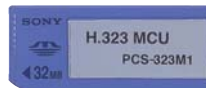
Dimensions:  
Ø 248 x 104 (H) mm  
Mass: 1.5 kg



### PCS-B768

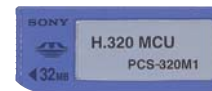
ISDN Unit

Dimensions:  
165 (W) x 34 (H) x 127 (D) mm  
Mass: 0.40 kg



### PCS-323M1

H.323 MCU Software



### PCS-320M1

H.320 MCU Software



### PCS-A1

Microphone

Dimensions:  
Ø 74 x 16 (H) mm  
Mass: 0.17 kg



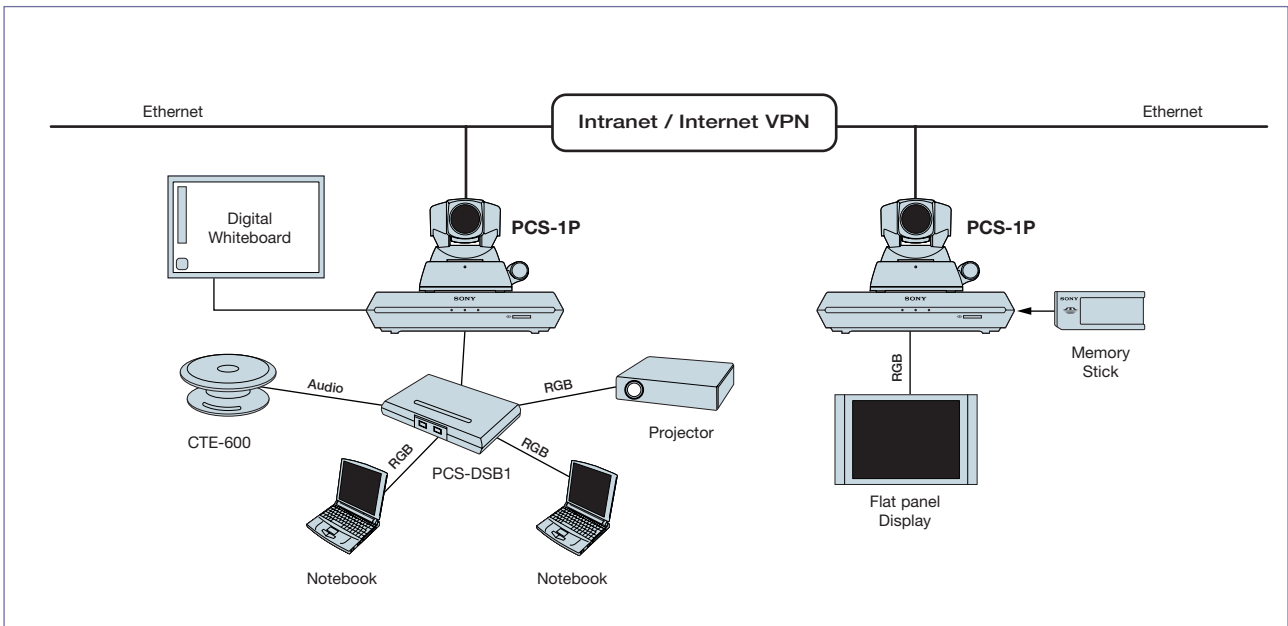
### EVI-D100P

Communication Colour  
Video Camera

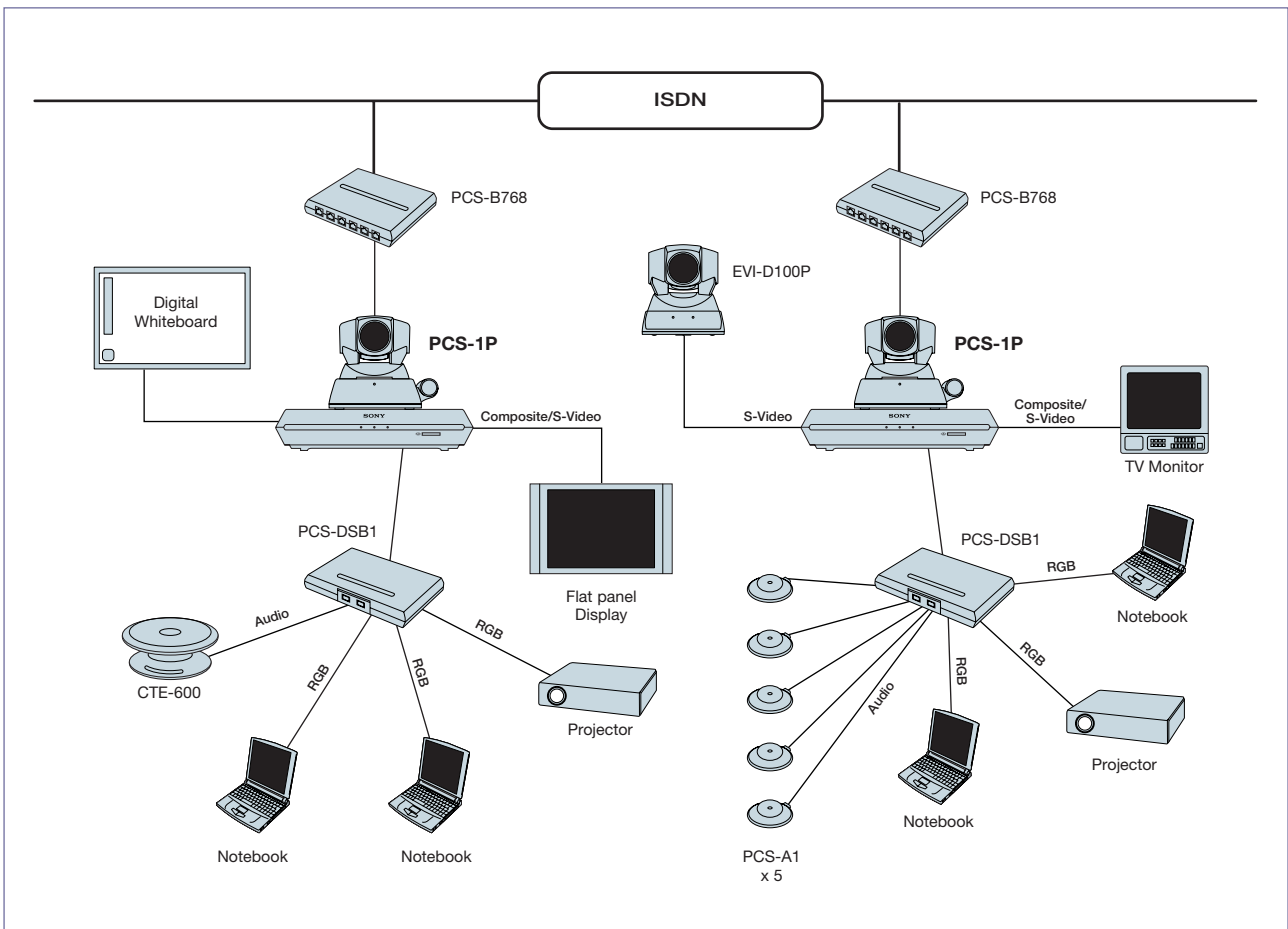
Dimensions:  
113 (W) x 120 (H) x 132 (D) mm  
Mass: 0.86 kg

# System Configuration Examples

A videoconference via a network using a single projector or flat panel display in "Picture in Picture" mode



A videoconference via an ISDN line using a projector and either a flat panel display or TV monitor



# Specifications

VIDEO	
Signal system	PAL
Standards	H.261, H.263, H.263+, H.263++, H.264, MPEG-4 SP@L3
Resolution	QCIF, CIF
Frame rate	Max. 30 frames/s
Bit rate	Up to 768 kb/s in H.320 (Incl. audio) Up to 2 Mb/s in H.323 (Incl. audio)

AUDIO	
Bandwidth and coding	G.711: 3.4 kHz at 56/64 kb/s
	G.722: 7.0 kHz at 48/56/64 kb/s
	G.722.1: 7.0 kHz at 24 kb/s (H.323)
	G.728: 3.4 kHz at 16 kb/s
	G.723.1: 3.4 kHz at 5.3/6.3 kb/s (H.323)
	G.729: 3.4 kHz at 8 kb/s (H.323)
Echo cancellation	MPEG-4 AAC mono 14 kHz at 48 kb/s (H.323)
	Reduction rate: 30 dB Echo path length: 340 ms (4 kHz and below) 110 ms (4 to 8 kHz) 56 ms (8 kHz and above) Noise suppressor included Automatic gain control included

GRAPHICS	
	XGA: 1024 pixels x 768 lines (H.263) 4CIF: 704 pixels x 576 lines (H.261 Annex D and H.263 Base)

PICTURE IN PICTURE	
	Sub screen size: 1/9 (One of four corners)

ITU-T STANDARDS	
	H.320, H.323, H.221, Bonding, H.281 FECC, H.225.0, H.245, T.120

NETWORK PROTOCOLS	
	TELNET (Server), HTTP (Server), FTP (Server), SNMP (Agent), PING, DNS (Client), DHCP (Client), RTCP, RTP, TCP, ARP

MULTIPOINT CAPABILITIES	
	Up to 6 sites (H.323)
	Up to 10 sites (H323)*
	Up to 6 sites (H.320)

\* Two PCS-1P units with PCS-323M1 installed must be used.

LIP SYNCHRONISATION	
	Manual On/Off

CAMERA UNIT	
Image sensor	1/4 type CCD
Horizontal resolution	460 TV lines
Focal length	3.1 to 31 mm (F1.8 to 2.9)
Focus	Auto/Manual
IRIS	Auto
Horizontal view angle	6.6 to 65 degrees
Zoom ratio	x10 (Optical zoom), x40 (Digital zoom)
Pan angle	-100 to +100 degrees (Max. 300 degrees/s)
Tilt angle	-25 to +25 degrees (Max. 125 degrees/s)
Preset	Up to 6 positions
S/N	More than 50 dB
Others	Back light shooting

REMOTE COMMANDER	
	Format: Wireless SIRCS

I/F OF PCS-1P	
Video	S-video input x 1
	Composite input x 1
	S-video output x 2
	Composite output x 1
	RGB output x 1
Audio	IR for PCS-DS150P x 1
	Line input (RCA) x 1
	External microphone input (Plug in power) x 2
	Line output (RCA) x 2
Graphics	Internal microphone x 1
Network	RGB (XGA) output x 1
Digital whiteboard	10Base-T/100Base-TX x 1
Memory Stick	Dedicated connector x 1
Control	Memory Stick slot x 1
	RS-232C/VISCA (Mini-DIN 8-pin) for second camera x 1
	SIRCS IR output for TV monitor x 2
	IR for Remote Commander x 1

I/F OF PCS-DSB1	
Audio I/F	Microphone input (Mini jack) x 5
	Line output (Mini jack) to active speaker x 1
	AUX input (RCA) x 1
Graphics	AUX output (RCA) x 1
	RGB (XGA, SVGA, VGA) input x 2
	RGB (XGA) output x 1

I/F OF PCS-B768	
	ISDN: BRI (Basic Rate Interface) x 6

ENVIRONMENT	
Operating temperature	5 °C to 35 °C
Operating humidity	30% to 70%
Storage temperature	-20 °C to +55 °C
Storage humidity	25% to 75%

POWER REQUIREMENT AND CONSUMPTION	
Requirement	AC 220 V to 240 V, 50/60 Hz
Consumption	DC 19.5 V, 3.5 A

DIMENSIONS AND WEIGHT	
Communication Terminal	258 (W) x 54 (H) x 171 (D) mm, 1.3 kg
Camera Unit	147 (W) x 130 (H) x 138 (D) mm, 1.1 kg
Remote Commander	50 (W) x 24 (H) x 197 (D) mm, 0.14 kg (Incl. battery)

SYSTEM COMPONENTS AND SUPPLIED ACCESSORIES	
Communication Terminal	x 1
Camera Unit	x 1
Remote Commander	x 1
Camera Cable (0.25 m)	x 1
AC Adaptor	x 1
IR Repeater	x 2
Manganese Battery for Remote Commander	x 2
Velcro for Communication Terminal	x 2
Double-faced Tape for Camera Unit	x 3
Audio Cable (1.0 m)	x 1
S-Video Cable (1.5 m)	x 1
Operation Manual	x 1 (Japanese, English, French, Spanish, Italian, German, Simplified Chinese)
Warranty Card	x 1

Sony address/contact details/dealer stamp

**SONY**

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