



High-End Videoconferencing System

Videoconferencing is evolving. For use in corporate boardrooms, operating theatres or large-scale auditoria, today's professional conferencing users demand much more than sparkling picture and audio quality. They also need versatile multi-point operation, hassle-free set-up, reliability and easy expansion to meet future needs.

Teaming high performance and advanced features with friendly operation, the elegantly-styled PCS-G70NP sets a new benchmark for voice, video and data communications. Supporting latest coding standards for smoother, more natural video images, the PCS-G70NP delivers television quality pictures and crystal-clear wideband audio in point-to-point or multipoint calls. It's also designed as a smarter, more secure conferencing solution, allowing you to set up calls across any mix of IP, ISDN, DSL and (mobile) telephone connections. Advanced Quality of Service features ensure optimum call quality under all network conditions, while embedded encryption ensures that confidential information stays that way.

Effective multi-site conferencing is an increasingly vital aspect of modern business communications. The PCS-G70NP can connect directly with up to five remote sites, which can be viewed on five individual video monitors, or with up to ten sites in cascade mode. In smaller rooms, multiple participants can be viewed on one screen in split-screen format with the name of each participant labelled on-screen so it's always clear who is speaking.

The dual-camera capability of the PCS-G70NP enriches any conference where a second point of view is required. Video can be captured and transmitted simultaneously from two sources, with images viewed on separate monitors or on a 'split' display. It's even possible to capture widescreen 16:9 images to suit the latest plasma and LCD display screens using the Sony BRC-300 3-CCD colour camera.

Fuss-free, intuitive operation is a hallmark of the PCS-G70NP. The customisable user interface offers a Quick Dial feature for rapid set-up of any conference without fiddly entry of phone numbers and user settings. Alternatively, slip in a Memory Stick and the PCS-G70NP will auto-launch a conference, adjusting all necessary settings according to the contents of your personal address book.

Adding an optional data-sharing box turns the PCS-G70NP into a powerful multimedia tool for distance learning, training and other knowledge-sharing applications. Augment every conference with sparkling graphs, charts and images from a connected notebook PC or make sketches and annotations in real-time using the Mimio Xi™ electronic whiteboard. For the largest rooms and venues, XGA data images can be viewed during a conference on a separate monitor or projector while two other monitors display a far-side view and self-view. If required, the PCS-G70NP can be connected to up to eight monitors in total – displaying five independent sites during a multipoint conference, XGA data, a conference overview and a self-view.

Powerful, flexible and expandable yet supremely stylish and simple to use, the new Sony PCS-G70NP brings people, images and ideas closer together than ever before.



Optional Accessories



PCSA-CG70P
Standard Camera Unit



PCSA-DSB1S
Data Solution Box



PCSA-PRI
Primary
Interface
Unit

■ Stylish Design

The sleek, discreet lines of the main processor and camera units make the PCS-G70NP an elegant complement to any boardroom or auditorium. The processor itself can be mounted horizontally or vertically (NB: vertical mounting requires optional Codec Stand). Each camera can be sited on a stylish eye-level stand, and cameras can respond to commands from the supplied IR Remote Commander.

■ Intuitive Interface and Easy-to-Use Remote Commander Unit

The PCS-G70NP requires minimal user intervention to easily set up a video conference via the remote commander unit and the intuitive interface. The supplied ergonomic remote commander unit that allows quick, simple on-screen navigation.

Placing a call can be achieved either by pressing one of the three Quick Dial buttons or by typing in the number of the remote videoconference system via the remote commander and press "Connect". The PCS-G70NP 'smartly' identifies whether the number is an IP or ISDN number for maximum user convenience, and the user does not have to worry about selecting the right network connection.

The system Phone Book stores up to 500 contacts for quick and easy dialing. A call history log stores the last 32 incoming and/or outgoing calls, making it quick and easy to contact a recently-called party.



Remote
Commander

■ Memory Stick™ Support¹

'Private' phone books can be stored on handy, removable Memory Stick media. Simply insert a Memory Stick into the main processing unit of the PCS-G70NP and it will automatically activate the private phone book, making the user's personal contacts available and eliminating the need to manually re-enter contact information to place a call. Memory Stick media can also be used to store captured images, PC-generated data, digital whiteboard drawings and other data created during a conference. Software updates can also be performed simply using Memory Stick. Pictures from a Sony Cyber-shot camera can be shown in a slideshow during any videoconference simply by inserting the Memory Stick into the PCS-G70NP and opening the Memory Stick directory.

¹ In addition to Memory Stick, Memory Stick PRO™ and Memory Stick DUO™ with an adaptor can be used.

■ High-Quality Video/High-Speed Network Connection

The high quality video codec and high-speed network support of the PCS-G70NP deliver video quality comparable to standard TV broadcasts, offering 4CIF live video at bandwidths as high as 4 Mbps over IP networks or 2 Mbps over ISDN. In addition, the PCS-G70NP offers full support for the recently-ratified ITU-T H.264 video codec standard, supporting interlaced SIF with 50 fields per second for extremely smooth, natural images².

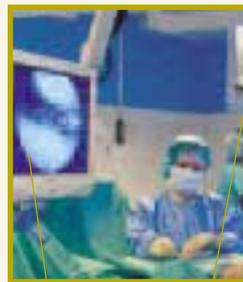
In addition to the supplied PCSA-CG70P camera unit, the PCS-G70NP supports a range of optional color Pan/Tilt/Zoom video cameras: the BRC-300, a 16:9/4:3 switchable 3-CCD camera that delivers exceptional quality video and that is an ideal complement to the latest generation of widescreen camera display; the EVI-D70PW, a white model of PTZ video camera; the EVI-D70P, a black model of PTZ video camera; the EVI-D100P, a PTZ video camera. A total of four video cameras can be connected to the PCS-G70NP.

² The PCS-G70NP supports a maximum of 50 fields per second in interlaced SIF format.

Operating Room

Surgeons in an operating theatre can share live audio and video links with doctors at remote location. Surgeons in the theatre sees the far-end doctor on a video monitor as well as the live endoscopic images from the patient. The far-end doctor also sees the images from the patient, hears audio and views DICOM patient data - all in real time. He can thus give to the surgeons a second opinion.

Near End: Operating Room



Live
endoscopic
camera view



Live view
from 'Far
End' Doctor
for Second
Opinion



PCSA-B768S
ISDN Unit (6 BRI)



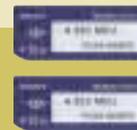
PCSA-B384S
ISDN Unit (3 BRI)



PCSA-STMG70
Codec Stand



PCSA-STCG70
Camera Stand



PCSA-M0G70
H.320 MCU Software
PCSA-M3G70
H.323 MCU Software

■ **Superb Sound Quality**

The PCS-G70NP provides exceptionally clear, natural-sounding audio. Wideband audio processing for point-to-point and multipoint conferences uses the MPEG-4 AAC (Advanced Audio Coding) standard, whether using IP, ISDN or mixed IP/ISDN networks. The built in echo cancellation and noise reduction system ensures improved intelligibility by minimizing the distraction of unwanted echoes during conferences. The PCS-G70NP is also compatible with a wide range of Sony external microphones and speakers, speakers, for greater flexibility.

■ **Dual Camera and Split Picture Support**

The PCS-G70NP can be configured to handle simultaneous video streams from two cameras, making it an ideal solution for providing coverage of large conference rooms or for capturing video of a specific area of interest during a videoconference, such as a close-up of a surgical procedure. Video from each camera can be displayed on dual monitors, or alternatively pictures can be combined and viewed on a single monitor as a 'split screen' image. A total of four cameras or other video sources such as a DVD player or VCR can be connected to the PCS-G70NP. During a conference, users can switch dynamically between video sources and choose between sending either one or two sources at the same time to other participants.

■ **Data-Sharing Capabilities/Digital Whiteboard Support**

With the optional PCSA-DSB1S Data Solution Box, two PC's or notebooks can be connected simultaneously to send graphics and documents for sharing with other conference participants. These powerful data sharing capabilities make communications more effective in wide range of business, education and scientific applications. Word processing documents, spreadsheets, presentations or digital artwork can be displayed³ in native XGA resolution.

Further improving the natural interactivity of a face-to-face meeting, an optional Mimio Xi^{TM4} connected to the PCS-G70NP 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-G70P and stored to the Memory StickTM for sharing, storage or wider distribution.

³ Sending data requires the optional PCSA-DSB1S Data Solution Box which is however not required for receiving data.

⁴ Please contact your local Sony sales office for information on compatible digital whiteboards.



Camera Unit and Stand



Far End: Doctor for Second Opinion



IP/
ISDN



XGA patient
data

Education

Teachers can deliver a lecture from a remote location, appearing on a plasma screen while images from the remote teacher's own PC are shared with students via a classroom projector. Another classroom-based teacher can use the electronic whiteboard to make notes that can be seen by the remote teacher in real time. As many as ten sites can be linked simultaneously in a single multi-point conference.

Near End: Classroom





PCS-A1
Omnidirectional
Microphone



BRC-300P
3-CCD Color Video
Camera



EVI-D70PW
PTZ Color
Video Camera



EVI-D70P
PTZ Color
Video Camera



EVI-D100P
PTZ Color
Video Camera

■ **Multi-Point Videoconferencing at up to Ten Sites**

The PCS-G70NP is unique in providing high quality video (H.264) and crisp, clear wideband audio (MPEG-4 AAC) – even in multi-point conferences. Using optional MCU software, the PCS-G70NP can be configured to communicate with up to five remote sites simultaneously (six sites total) via any mix of IP, ISDN, DSL and (mobile) telephone connections. Moreover, the PCS-G70NP can cascade with another PCS-G70NP, PCS-1P or PCS-TL50P to link up to ten sites, again offering high bandwidth per connected site and supporting H.264 and MPEG4 standards. For even greater versatility, the ‘speedmatching’ function ensures, for instance, that higher speed connections over IP networks and lower speed ISDN connections can be brought together within one multipoint conference without reducing connection speeds to the lowest denominator. With ‘MCU on the fly’ support, users can start off with a peer-to-peer videoconference and expand into a multi-point meeting at any time by simply dialing additional contacts as required.

■ **Multiple Display Output**

In addition to its main monitor output, the PCS-G70NP can support up to five additional monitors to display pictures from far-side sites in a six-way videoconference.

■ **Site-Name Display**

It can be difficult keeping track of who’s who in a multi-point conference. The PCS-G70NP can display the name of each participant, their company or location on-screen.

■ **Flexible Display Patterns at all Sites**

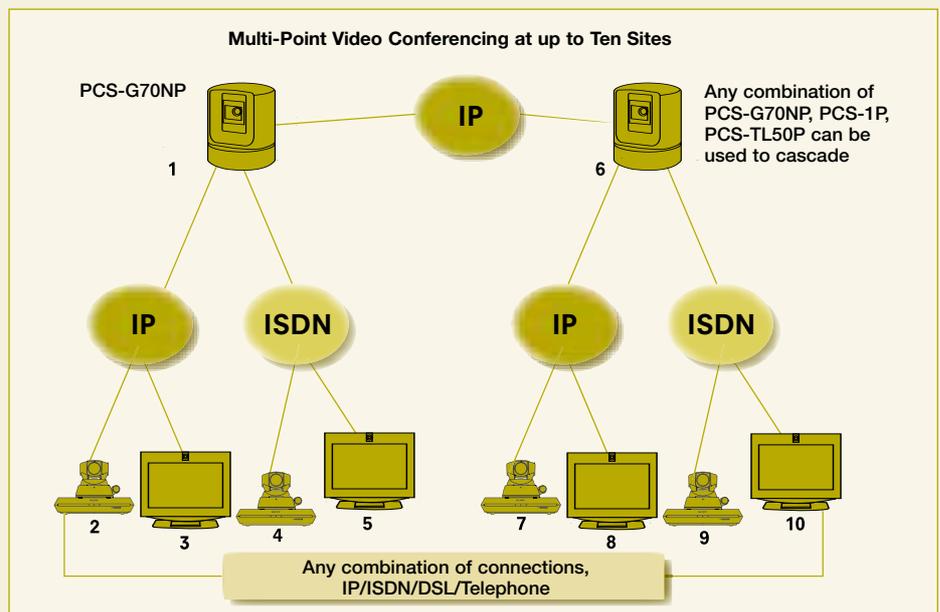
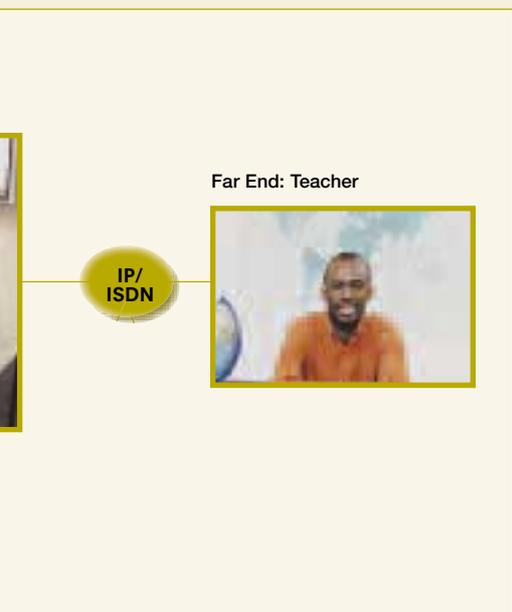
The PCS-G70NP offers a range of flexible display options, allowing you to customize the look of any conference to suit your precise needs and the number and positioning of connected display monitors. It can show far side participants as a full-screen view, or alternatively display near-side and far-side sites simultaneously as a picture-in-picture mode. Four-screen and six-screen continuous-presence modes are also supported for the most appropriate display format to match the number of connected sites that are. In both full-screen and continuous-presence modes, two display options are available:

Voice Switching

Voice switching mode in a six-screen (or 5+1 screen layout) displays the active speaker as the largest on-screen inset, with the other five participants grouped around them as smaller images. When the active speaker changes, they are automatically ‘promoted’ to be the largest displayed inset picture, while the previous speaker re-joins the other smaller picture insets.

Fixed Site

The selected far-side participant is continuously displayed on the monitor when the unit is in full-screen mode. In continuous-presence mode, the selected far-side site is displayed in the largest of the six inset sub screens.



PCS-G70NP Specifications

VIDEO	
Signal system	PAL
Standards	H.261, H.263, H.263+ (Annex L, F, T, I), H.263++, H.264, H.263 Annex W and H.264 Interlaced SIF, MPEG-4 SP@L3, H.239 Dual Stream Support
Resolution	SQCIF (128 x 96, reception only), QCIF (176 x 144), CIF (352 x 288), 4CIF (704 x 576, H.263 only), Interlaced SIF (H.263, H.264 only)
Frame rate	Max. 30 frames/s (H.261, H.263, H.263+, H.263++, H.264, and MPEG-4 SP@L3) Interlaced SIF Mode (50 fields/s)
Bit rate	Up to 4 Mb/s in H.323 (Incl. audio) Up to 2 Mb/s in H.320 (Incl. audio) when configured with the PCSA-PR1 Up to 768 Kb/s in H.320 (Incl. audio) when configured with the PCSA-B768S Up to 384 Kb/s in H.320 (Incl. audio) when configured with the PCSA-B384S

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 24/32 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) MPEG-4 AAC (mono) 14 kHz at 64/96 Kb/s (H.323) at 48 Kb/s (H.320)
Echo cancellation	Noise Suppressor included Automatic Gain Control included

GRAPHICS	
XGA	1024 pixels x 768 lines (H.263), with PCSA-DSB1S
4CIF	704 pixels x 576 lines (H.261 Annex D and H.263)

PICTURE IN PICTURE	
Sub screen size	4.3" (256 x 192), One of four corners

ITU-T STANDARDS (excludes audio/video standards)	
	H.320, H.323 H.221 Bonding H.281 FECC H.225.0 H.242 H.243 H.245 T.120

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

MULTIPOINT CAPABILITIES	
	Up to 6 sites (H.320/H.323)*
	Up to 10 sites (H.320/H.323)* in cascade mode

LIP SYNCHRONIZATION	
	Manual On/Off

CAMERA UNIT	
Image device	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
Zoom ratio	x10 Optical zoom (x40 with digital zoom)
Pan angle	-100° to +100° (Max. 100°/sec)
Tilt angle	-25° to +25° (Max. 125°/sec)
Preset	Up to 6 positions
S/N	More than 50 dB
Others	Back light compensation Auto white balance

IR REMOTE COMMANDER	
Format	Wireless SIRCS

INTERFACES OF PCS-G70P	
Video	D-Sub 15-pin Dedicated Camera I/F x2 S-video or Composite input x2 (switchable with conversion connector) S-video output x2 (for main/sub monitor) S-video output x5 (for individual sites in MCU) Composite output (AUX) RGB output
Audio	Line input RCA AUX input RCA (bypass echo cancellor) External analog microphone input, Mini-jack (Plug in power) x2 External digital microphone input x2 Line output RCA x2 (one mixed output)
Network	10Base-T/100Base-TX External ISDN Unit I/F
Control	SIRCS IR Out x2 Wired SIRCS In (Control-S) RS-232C
DSB	I/F Dedicated D-Sub 15
RGB	I/F RGB output
Memory Stick	Memory Stick slot
Digital whiteboard	Dedicated connector

INTERFACES OF PCSA-CG70P	
Video	IR to PCS-DS150P
Terminal	Dedicated 23-pin
AUX camera	8-pin Mini-DIN

GENERAL	
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 Requirements	AC 220 V to 240 V, 50/60 Hz
Power Consumption	DC 19.5 V, 5 A
Communication Terminal (PCSA-CG70P)	420 x 70 x 256 mm (16 5/8 x 2 7/8 x 10 1/8 inches) excl. projections
Dimensions (W x H x D)	
Camera Unit (PCSA-CG70P)	131 x 141 x 130 mm (5 1/4 x 5 5/8 x 5 1/8), excl. projections
Dimensions (W x H x D)	
Remote Commander (PCSA-RG70)	47 x 43 x 195 mm (1 7/8 x 1 3/4 x 7 3/4 inches), excl. projections
Dimensions (W x H x D)	
Communication Terminal (PCSA-CG70P) Mass	5.3 kg (11 lbs 11 oz)
Camera Unit (PCSA-CG70P) Mass	1.0 kg (2 lbs 3 oz)
Remote Commander (PCSA-RG70) Mass	180 g (6.3 oz), incl. batteries

SYSTEM COMPONENTS AND SUPPLIED ACCESSORIES	
PCS-G70P Communication Terminal	
PCSA-CG70P Camera Unit (includes dedicated 3 m camera cable)	
PCSA-RG70P Remote Commander	
PCSA-AC19V6 AC Adaptor/Power Cord	
IR Repeater x2	
Manganese Battery for Remote Commander x2	
Operation Manual CD-ROM (Japanese, English, French, Spanish, Italian, German, Portuguese, Simplified Chinese)	
Operation Guide	
Quick Connection Guide	
Cable Connection Guide	
Worldwide Warranty Booklet	
Audio Cable (1.0 m)	
S-Video Cable (1.5 m)	
Mini DIN 7-pin to RCA Conversion Connector	

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