

Panasonic
ideas for life

HD Visual Communications System
KX-VC500



So Real



Making Communication Visible with the HD Visual Communications System

The HD Visual Communications System provides smooth conversations with high-resolution video quality over not only a company intranet, but also the Internet. It is also easy to operate. The resulting real-life visual communication makes it seem like everyone is in the same room, even though they are in remote locations. The HD Visual Communications System enables the kind of precise communication and real-time collaboration between remote locations that was simply not possible with conventional videoconference systems because of their low resolution and frequent sound interruptions and delays.

- People's facial expressions are difficult to see.
- It's hard to tell who's talking.
- Communication is often interrupted.
- It's difficult to operate.

Meetings that were previously inefficient...



High Image
Quality

High Sound
Quality

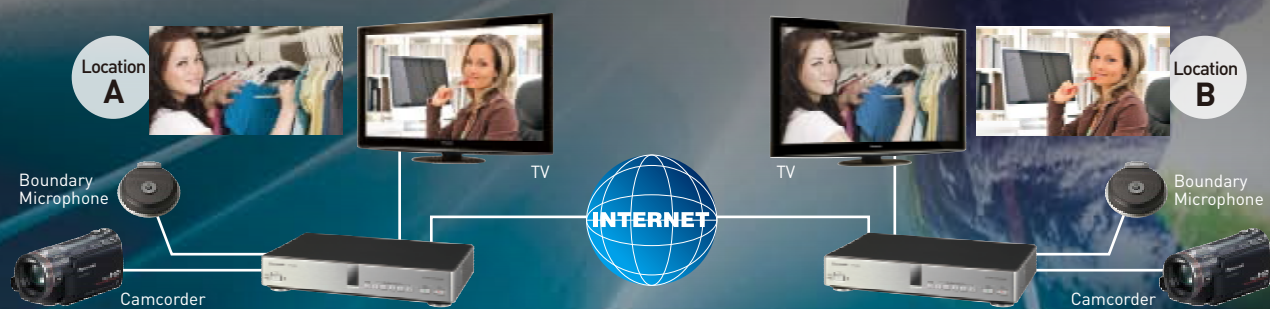
Easy
Operation

Stable
Connection



- Now have great images, so facial expressions are clear.
- Now allow natural, comfortable conversations.
- Now enable easy use with a stable network connection.
- Let you switch conveniently to a sub camera or PC.

System Connection Diagram



The HD Visual Communications System Handles a Wide Variety of Tasks.

With conventional videoconference systems, it was difficult to view people's expressions and the connection was unstable. This sometimes made it necessary for people to travel in order to hold meetings in person. With the HD Visual Communications System, you can conduct natural conversations with high image and sound quality, as if the person you are talking to were standing right next to you, for more personal communication. This lets you apply the HD Visual Communications System to a variety of situations that were difficult for conventional videoconference systems.

Medical Treatment

Gain advice from medical specialists in remote locations.

Reducing Differences in the Level of Medical Services

Medical specialists can now advise doctors in other regions by using the high-quality images of the HD Visual Communications System. It can also be used for training doctors, to help reduce differences in the level of medical services from region to region.



Education

Active collaborative research with remote locations.

Almost Like Being in the Same Laboratory

Connecting research laboratories located in remote areas with the HD Visual Communications System enables comfortable, collaborative research. The high image and sound quality allows precise collaborative research, as if both parties were in the same room. It can also be used for live remote teaching and training.



A Valuable Communication Tool for Emergencies

Even when travel is restricted due to a disaster, such as the spread of an influenza virus, an earthquake, or heavy rain, the HD Visual Communications System can connect people in remote locations with sharp images and clear audio, and enable them to carry on with business as usual. The system contributes to risk management without causing problems for your customers or clients.





Manufacturing Industry

High-quality communication between remote locations.

See Close-up Views of Detailed Parts and Prototype Models

Sub cameras can be used to display clear images of substrates, blueprints and design prototypes on a desk. Even for cases that used to require a business trip in order to show and discuss fine details, the HD Visual Communications System allows both parties to see objects clearly for instant discussion, resulting in travel-free meetings.



Others

Wide-ranging business applications.

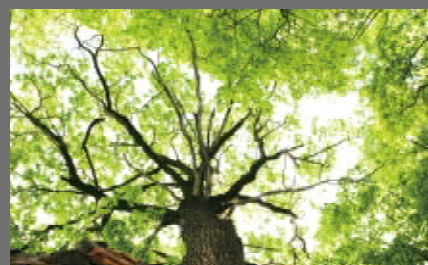
Easy, Comfortable Meetings Between Remote Locations

The kinds of problems that are common with ordinary videoconferences, such as poor-quality images and disrupted, delayed or interrupted audio, have been resolved. In addition to in-company networks using an intranet, remote meetings can be held smoothly and easily with clients and customers outside the company over the Internet. There are many other convenient uses, such as connecting the HD Visual Communications System to a PC and showing the PC screen to the other party.



Less Travelling Also Reduces CO2 Emissions and Costs

In recent years, social demands for ecological conservation have continued to grow. From now on, a strong emphasis will be placed on environmentally friendly businesses, which reduce the number of times people have to travel in order to reduce the amount of CO2 emitted by transportation systems. Of course, this also helps to reduce travelling costs and time. The HD Visual Communications System is a vital tool for future businesses because it can simultaneously make business more efficient and more ecological.



Four Features that Support Comfortable Business

The HD Visual Communications System is a clear departure from previous videoconference systems. And a wide range of advanced Panasonic technologies support the new system.

1 Expressions and gestures are clearly conveyed. High Image Quality

Panasonic's unique high-quality image technology, which was accumulated with its VIERA and DIGA products, help to create a powerful realism, making it seem like everyone is in the same room. The digital home electronics platform Uniphier® system LSI also makes it possible to display facial expressions and gestures in clear, full-HD images as part of the visual communication experience.

* Uniphier® is a registered trademark of Panasonic Corporation.



A highly realistic atmosphere is achieved.



UniPhier®



2 Two-way conversations are smooth and natural. High Sound Quality

Natural 2-way conversations are achieved thanks to a unique echo canceller. It reduces echo and howling, and enables a lifelike sound quality without interruptions even when two people speak at the same time. Broadband stereo achieves clear and expansive sounds. In addition, a boundary microphone (sold separately) with a direction recognition function, indicates the direction of the speaker's voice and position to the listeners. This creates a natural conversation that makes it feel like everyone is in the same room even when they are in remote locations, and relieves fatigue when talking for long periods of time.

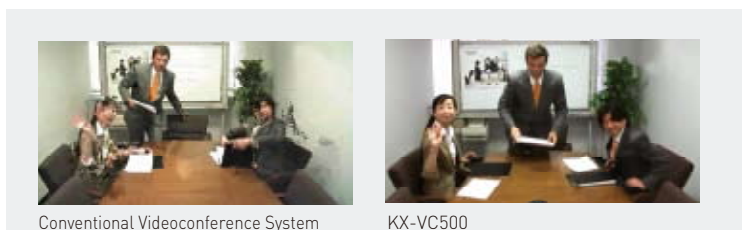


Natural 2-way conversations can be held.

3 Adapts to changing network conditions. Stable Connection **AV-QoS**

The HD Visual Communications System is packed with Panasonic technology for connection stability. A rate control function accurately estimates network congestion, and controls the data transfer amount to reduce packet loss. In addition, the combined usage of Forward Error Correction (FEC) and Automatic Repeat reQuest (ARQ) helps to restore inevitable packet loss. These functions make it possible to achieve a stable connection and prevent image disruptions and sound interruptions, both on intranets and on the Internet, where bandwidth is not guaranteed and the usable bandwidth constantly changes due to traffic conditions. The range of business opportunities naturally expands because of the ability to conduct visual communication with clients and customers outside the company.

■ Comparison with a congested network connection.

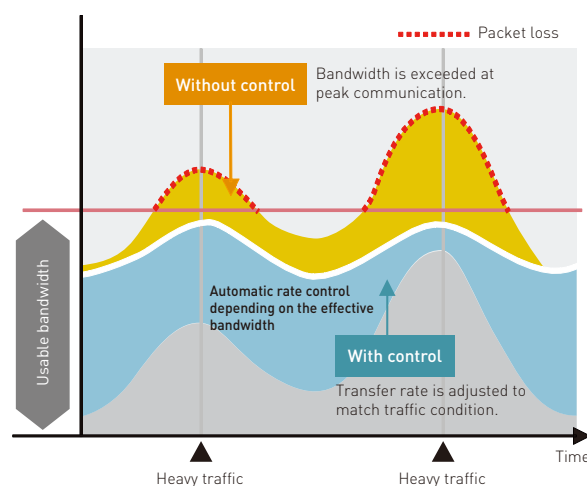


Conventional Videoconference System

KX-VC500

Rate Control

Adjusts the traffic depending on network congestion.



4 Easy enough for anyone to operate.

Easy Operation

Easy-to-understand remote control operation and screen displays.

Select the desired party with either a one-touch button or by using the address book.



Speed Dial
You can contact five frequently called locations with a single touch.



Address Book
Select and connect to the desired party directly from the address book.



Connection Status Display Screen
You can easily check the connection status of the network and peripheral devices.

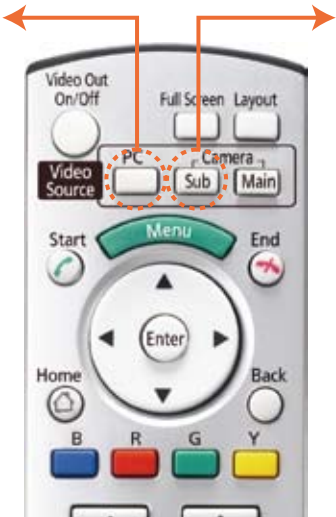


Content Sharing

Switch to a sub camera or a PC screen with one-touch ease, and share data, such as movies or software applications.

Sharing a PC Screen

Show your PC screen to the other party and discuss while you both look at the same graph or presentation data.



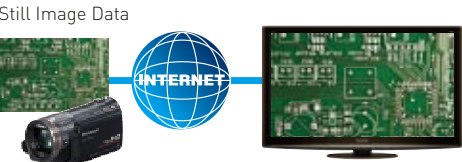
Close-up Views with a Sub Camera

Use a sub camera to display close-up views of detailed parts that are difficult to see with the naked eye.



Snapshots

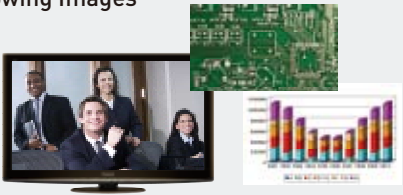
High-resolution still images taken with a sub camera can be sent in order to share sharp, clear images while sending only a small amount of data.



Check Facial Expressions While Showing Images

You can switch to the image of the other party while showing them images of your PC screen or sub camera, to check their response.

* Only the content sharing screen is displayed to the receiving party. Both sending and receiving screens cannot be displayed at the same time.



Rear Panel View



*In the interest of product improvement, changes may be made without advance notice.

Related Products

■ HD Camcorder



■ HD Integrated Camera
AW-HE50H



■ Full-HD Plasma/LCD Display



*HDMI cables are required for connection to the camera, TV, etc.

Specification

Main Unit (KX-VC500)		
Communication protocol		SIP
Communication rate (Min to max)	IP communication with 2 locations connected	512 kbps to 9 Mbps
	IP communication with 3 locations connected	1 Mbps to 7 Mbps
	IP communication with 4 locations connected	1.5 Mbps to 7 Mbps
Bandwidth (For different levels of resolution)		3 Mbps minimum*1 for 1080i 1.5 Mbps minimum*1 for 720p 512 kbps minimum*1 for 4SIF
Video codec		ITU-T H.264 high-profile
Video input	HDMI 1 (main camera)	Input resolution: 1080i video only
	HDMI 2 (sub camera)	Input resolution: 1080i video only Supports only camera connection. (Connection of a DVD player is not supported.)
Video output	VGA mini D-Sub 15P (RGB)	Input resolution: XGA, SVGA, VGA
	HDMI (television)	Resolution: 1080i video
	Component (video output)	Resolution: 1080i video
Audio codec		MPEG-4 AAC-LD (LATM)
Audio input	Boundary microphone	Supports up to 4 Boundary Microphones (part no.: KX-VCA001, sold separately).
	RCA pin jack (audio input)	1.2 Vrms Supported devices: stand microphone (via microphone amplifier), audio mixer, applies echo cancelling, Boundary Microphone and RCA inputs can be used at the same time.
Audio output	(HDMI)	Connected television (with speakers)
	RCA pin jack (audio output)	Connected television (with speakers), AV amplifier, active speaker
Maximum conference points		4 *2
Content sharing		PC (VGA terminal), sub camera (HDMI2 terminal image only)
Encrypted transmission		AES-CM/proprietary
Network	RJ45(LAN)	100BASE-TX full duplex
Control (serial)	RS-232C	For maintenance PC connection (with straight cable) D-Sub 9-pin male
Dimensions (W x H x D)		Approx. 430 mm x 80 mm x 280 mm
Weight		Approx. 4 kg
Voltage and frequency		AC 100-240 V, 50/60 Hz
Power consumption		During operation: Approx. 32 W, During stand-by: Approx. 30 W
Operating temperature		0 °C to 40 °C
Operating humidity		10 % to 90 % (non-condensing)
Boundary Microphone (KX-VCA001 sold separately)		
Standard pickup area		Approx. 2 m(radius), 360°
Maximum pickup area		Approx. 3 m(radius), 360°
Pickup method		Stereo (automatic left/right channel setting, with 1 unit connected)
		Monaural (with 2 to 4 units connected) *3
Microphone unit		Unidirectional Electret condenser microphone x 4
Number of connections		Maximum 4 microphones
Band frequency		150 Hz to 10 kHz
Maximum input sound pressure		110 dBspl
Sampling frequency		48 kHz
Delay time		1 ms max.
Microphone cable connectors		2
Mute switch		Push-and-return switch
LED		2 colour LED (red, green) to indicate mute status.
		Red: Mute on
		Green: active
		Orange: start-up (blinks approx. 1 sec) Off: not communicating
Dimensions		120 mm(diameter) x 25 mm
Cable length		Approx. 8.5 m
Power source		Supplied by a special cable from the main unit
Weight		Approx. 280 g
Operating temperature		0 °C to 40 °C
Operating humidity		10 % to 90 % (non-condensing)
Accessories		Remote control, remote control batteries (AA manganese batteries) x 2, power cord

*1 This value is for reference purposes only. The actual value may vary depending on the image and communication conditions.

*2 Some restrictions apply when 3 or 4 locations are connected. For details, please consult with your local dealer.

*3 Stereo sound can also be picked up from 2 to 4 units by changing the user setting.

- Specification is subject to change without notice.
- Dimensions and weights are approximate.