AddPac
Video Solution

Video Solution

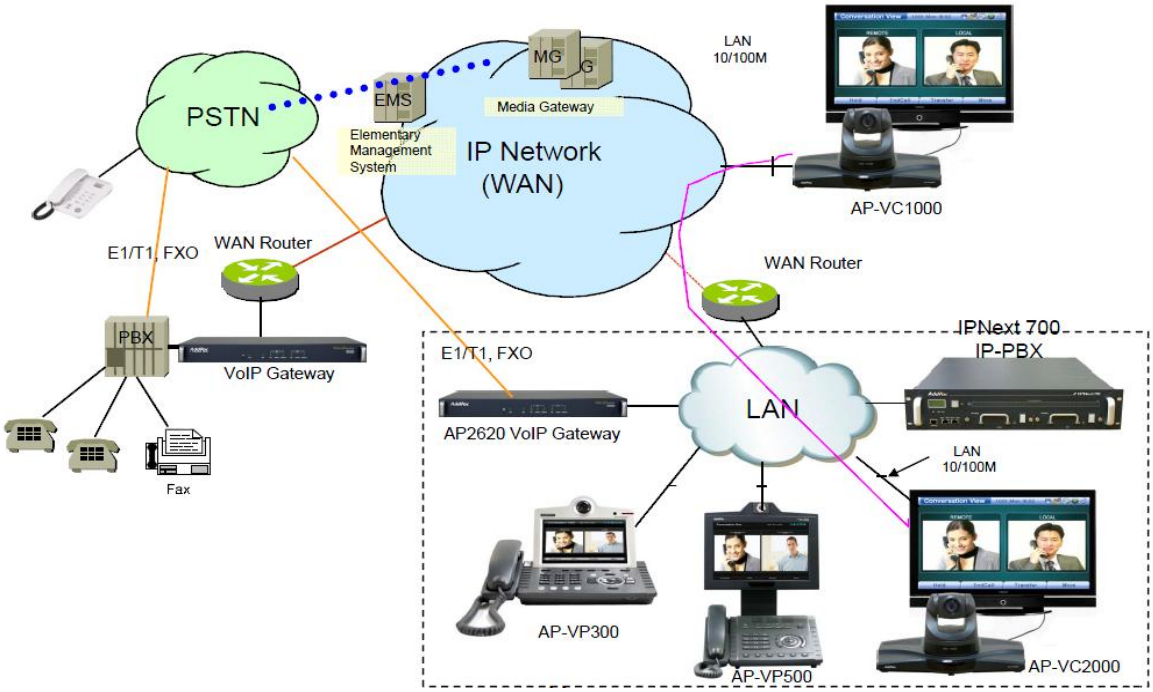
IP Video Conference Solution

AddPac Technology IP video conference product series delivers a new and powerful IP based video communication by simply connecting televisions, external video camera and ordinary telephones. Designed on firmware upgradeable high-performance DSP, AddPac Video Conference products are equipped with the latest audio/video codec, AV In/Out interfaces realizing complete Internet video telephony, video conferencing, VoD (video on demanding) applications and AV broadcasting system in one platform. AddPac IP Video Conference Equipment offers improved effectiveness with its cutting-edge DSP based video processing technology, IPv4/IPv6 based networking protocol technology and VoIP signaling technology such as H.323, SIP. By connecting ordinary telephones, televisions, CCD cameras and speakers to Video Codec, this device make the ultimate and easy solution for traffic control, audio/video broadcasting and various customer specific applications.

IP Video Conference Comparison Table

Model / Specification	AP-VC2000 	AP-VC1000 	AP-VC200 
Audio/Video Port	Two(2) Channel	One(1) Channel	One(1) Channel
Camera	External	External	Internal CCD
Video Codec	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264
Video Resolution	SD	SD	SD
Signaling	H.323/SIP	H.323/SIP	H.323/SIP
Video MCU	4-Party Video MCU	N/A	N/A
PSTN Interface	1-Port FXS	1-Port FXS	1-Port FXS, 1-Port FXO
LAN Port	2	2	2
Console Port	1	1	1
Power	External Power Adaptor	External Power Adaptor	External Power Adaptor

Network Diagram



HD IP Video Conference Solution

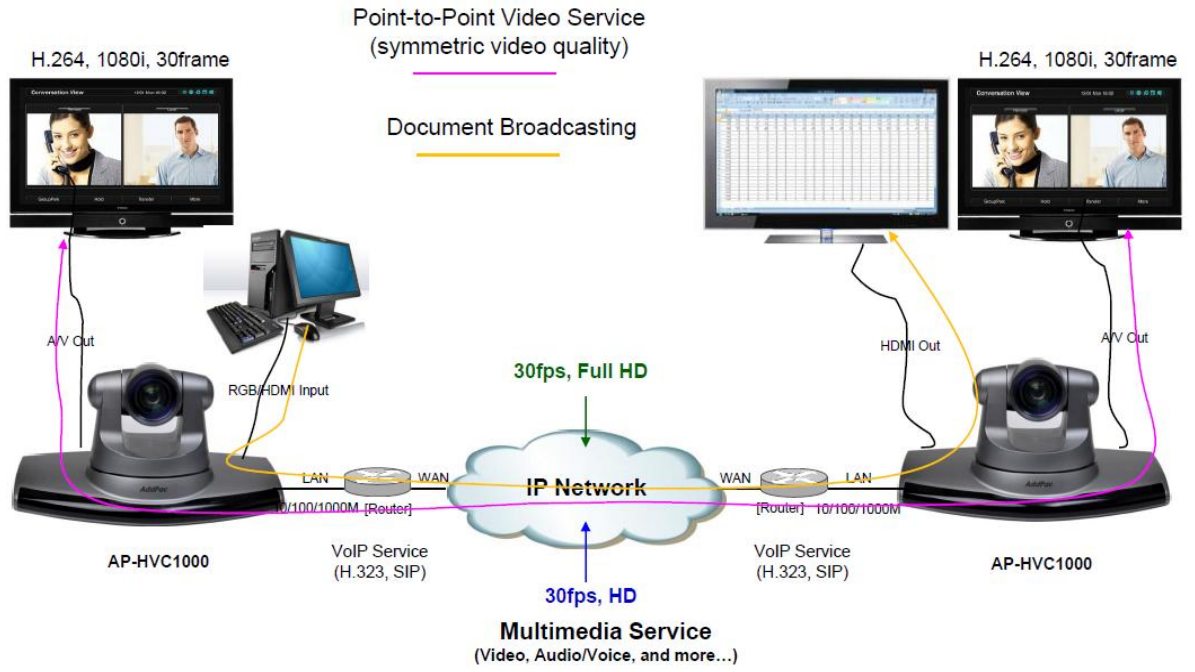
AddPac IP based Full HD/HD video conferencing devices are an all-in-one high performance IP video communication solution that supports built-in Full HD/HD camera as well as various video output interface. It is designed on the basis of high performance DSP processor to support the latest audio/video codec, various AV input/output interfaces for HD broadcasting as well as video conferencing. AP-HVC1000 Full HD Video Conference Codec supports two channel video interfaces; first channel provides Face-to-Face video conferencing with built-in Full HD camera and second channel provides various video transmit/receive function such as PC screen transmission, content transmission, and real time broadcasting. AP-HVC700 HD Video Conference Codec supports two channel video interfaces; first channel provides Face-to-Face video conferencing with built-in HD camera and second channel provides various video transmit/receive function such as PC screen transmission, content transmission, and real time broadcasting. AP-HVC600, AP-HVC500, AP-HVC300, AP-HVC200 HD IP Video Conference Codecs support one channel video interface for Face-to-Face video conferencing with built-in Full HD/HD camera

HD IP Video Conference Comparison Table

Product		AP-HVC1000 	AP-HVC700 	AP-HVC600 	AP-HVC500 
Camera Sensor		CMOS	CCD	CMOS	CCD
Optical Zoom		x10	x18	x10	x18
Video Resolution		Full HD : 720P, 1080i	HD : 720P(1280x720)	Full HD : 720P, 1080i	HD :720P(1280x720)
Channel One(1)	Video Input	Built-in Full HD Camera	Built-in HD Camera	Built-In Full HD Camera, Composite, HD-SDI, RGB, HDMI	Built-In HD Camera, Composite, HD-SDI, RGB, HDMI
	Video Output	Composite, Component, HDMI	Composite, Component, HDMI	Composite, Component, HDMI	Composite, Component, HDMI
	Audio Input	Stereo RCA Type	Stereo RCA Type	Stereo RCA Type	Stereo RCA Type
	Audio Output	RCA Type Audio (L,R)	RCA Type Audio (L,R)	RCA Type Audio (L,R)	RCA Type Audio (L,R)
	PTZ Control	N/A	N/A	Support	Support
Channel Two(2)	Video Input	Composite RCA, HD-SDI, RGB, HDMI	Composite RCA, HD-SDI, RGB, HDMI	N/A	N/A
	Video Output	Composite, Component, HDMI	Composite, Component, HDMI		
	Audio Input	Stereo RCA Type	Stereo RCA Type		
	Audio Output	RCA Type Audio (L,R)	RCA Type Audio (L,R)		
	PTZ Control	Support	Support		
LAN		One(1) 10/100M Ethernet	One(1) 10/100M Ethernet	One(1) 10/100M Ethernet	One(1) 10/100M Ethernet
Power		External Power Adaptor	External Power Adaptor	External Power Adaptor	External Power Adaptor

Product	AP-HVC200	AP-HVC300
		
Sensor	CCD	CMOS
Optical Zoom	x18	x10
Video Resolution	HD 720P(1280x720)	Full HD 720P, 1080i
Video Output	HDMI Component, RCA	HDMI, Component, RCA
Audio Out	Stereo Left, Right RCA Out	Stereo Left, Right RCA Out
Audio In	MIC/Audio In, 3.5mm Audio Input	MIC/Audio In, 3.5mm Audio Input
LAN	One(1) 10/100M Ethernet	One(1) 10/100M Ethernet
Power	External Power Adaptor	External Power Adaptor

Network Diagram



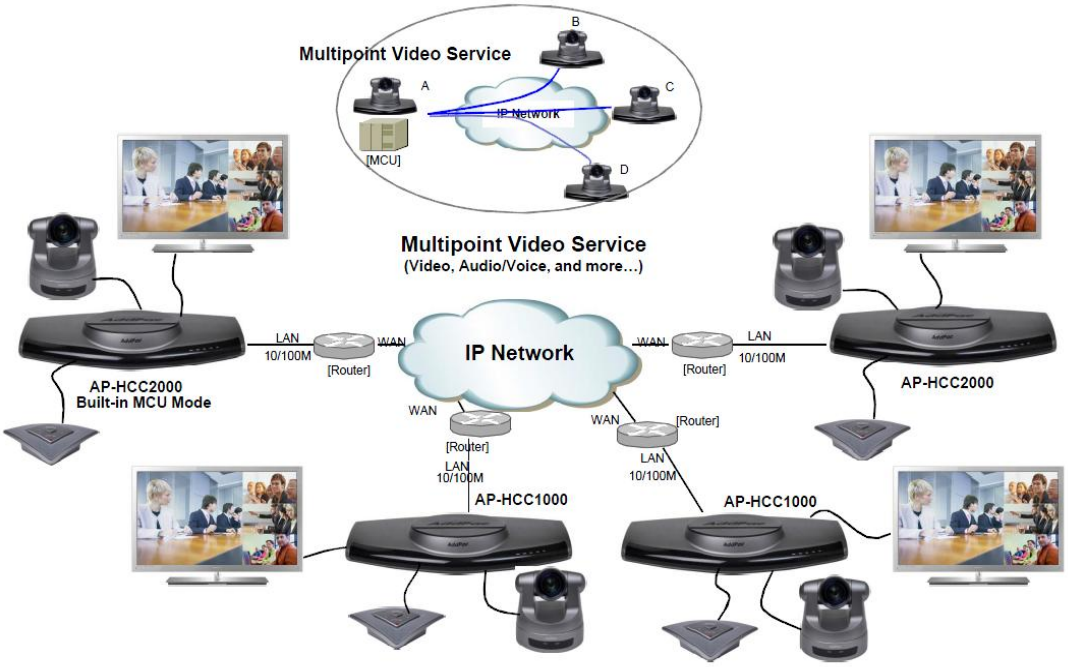
HD Video Conference Codec Solution

AddPac Full HD video conferencing codec is a high performance IP video telephony solution that supports video input interface for external Full HD camera as well as various video output interface. It is designed on the basis of high performance DSP processor to support the latest audio/video codec, various AV input/output interfaces for broadcasting as well as video conferencing. This can be connected with external PTZ full HD camera, HDTV, speaker and microphone. It is applicable to various fields such as audio/video broadcasting, document sharing as well as video conferencing. AP-HCC2000 Full HD Video Conference Codec supports two channel video interfaces with built-in 4-party video MCU; first channel provides face-to-face video conferencing with external Full HD camera and second channel provides various video transmit/receive function such as PC screen transmission, content transmission, and real time broadcasting. AP-HCC1000 Full HD Video Conference Codec supports two channel video interfaces; first channel provides Face-to-Face video conferencing with built-in Full HD camera and second channel provides various video transmit/receive function such as PC screen transmission, content transmission, and real time broadcasting. AP-HCC500 Full HD Video Conference Codecs support one channel video interface for Face-to-Face video conferencing.

Full HD Video Conference Codec Comparison Table

Product		AP-HCC2000 	AP-HCC1000 	AP-HVC500 
Video Resolution		720P, 1080i(60), 1080p(30)	720P, 1080i(60), 1080p(30)	720P, 1080i(60), 1080p(30)
Channel One(1)	Video Input	Composite RCA, HD-SDI, HDMI	Composite RCA, HD-SDI, HDMI	Composite RCA, HD-SDI, RGB, HDMI
	Video Output	Composite RCA, Component, HDMI	Composite RCA, Component, HDMI	Composite RCA, Component, HDMI
	Audio Input	Stereo RCA Type	Stereo RCA Type	Stereo RCA Type
	Audio Output	RCA Type Audio (L,R)	RCA Type Audio (L,R)	RCA Type Audio (L,R)
	PTZ Control	Support, RS232C	Support, RS232C	Support
Channel Two(2)	Video Input	Composite RCA, HD-SDI, RGB, HDMI	Composite RCA, HD-SDI, RGB, HDMI	N/A
	Video Output	Composite RCA, Component, HDMI	Composite RCA, Component, HDMI	
	Audio Input	Stereo RCA Type	Stereo RCA Type	
	Audio Output	RCA Type Audio (L,R)	RCA Type Audio (L,R)	
	PTZ Control	Support, RS232C	Support, RS232C	
Video MCU		4-Party Video MCU	N/A	N/A
LAN		One(1) 10/100/1000M Gigabit Ethernet	One(1) 10/100/1000M Gigabit Ethernet	One(1) 10/100/1000M Gigabit Ethernet
Power		External Power Adaptor	External Power Adaptor	External Power Adaptor

Network Diagram



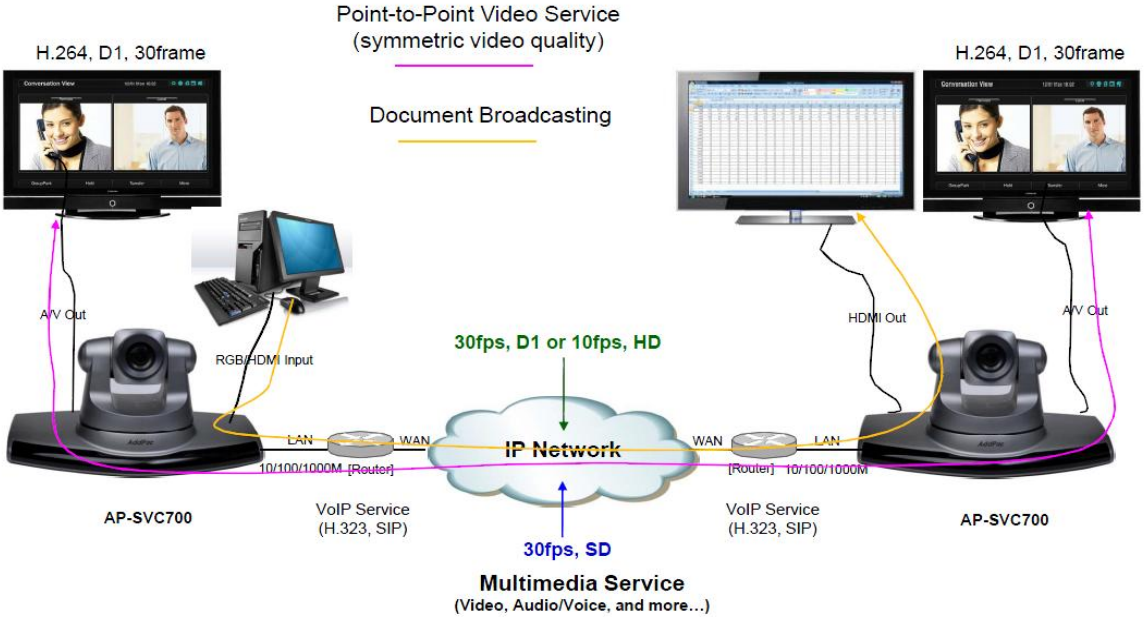
SD IP Video Conference Solution

AddPac IP based SD video conferencing devices are an all-in-one high performance IP video communication solution that supports built-in SD camera as well as various video output interface. It is designed on the basis of high performance DSP processor to support the latest audio/video codec, various AV input/output interfaces for video broadcasting as well as video conferencing. AP-SVC700 SD Video Conference Codec supports two channel video interfaces; first channel provides Face-to-Face video conferencing with built-in SD camera and second channel provides various video transmit/receive function such as PC screen transmission, content transmission, and real time broadcasting. AP-SVC500, AP-SVC200 SD IP Video Conference Codecs support one channel video interface for Face-to-Face video conferencing with built-in SD camera

SD IP Video Conference Comparison Table

Product		AP-SVC700 	AP-SVC500 	AP-SVC200 
Camera Sensor		CCD	CCD	CCD
Optical Zoom		x27	x27	x27
Codec Video Resolution		SD (D1, VGA)	SD(D1, VGA)	SD(D1, VGA)
Display Video Resolution		HD	HD	HD
Channel One(1)	Video Input	Built-in SD Camera	Built-In SD Camera or Composite	Built-In SD Camera
	Video Output	Composite, Component, HDMI	Composite, Component, HDMI	Composite, Component, HDMI
	Audio Input	Stereo RCA Type	Stereo RCA Type	Stereo RCA Type
	Audio Output	RCA Type Audio (L,R)	RCA Type Audio (L,R)	RCA Type Audio (L,R)
	External PTZ Control	N/A	Support	N/A
Channel Two(2)	Video Input	Composite RCA, RGB, HDMI	N/A	N/A
	Video Output	Composite, Component, HDMI		
	Audio Input	Stereo RCA Type		
	Audio Output	RCA Type Audio (L,R)		
	External PTZ Control	Support		
LAN		One(1) 10/100M Ethernet	One(1) 10/100M Ethernet	One(1) 10/100M Ethernet
Power		External Power Adaptor	External Power Adaptor	External Power Adaptor

Network Diagram



HD Video Conferencing Camera Solution

AddPac Technology video conferencing HD camera lineup is optimized in high quality video conferencing that can be used in various video conferencing environments. It supports various video definition and optical zoom such as Full HD, HD, and SD. Also, it is designed to support various video environments such as analog interface (NTSC, PAL), Component (Y, Cr, Cb) video interface, HD-SDI video interface, and HDMI interface. AddPac Technology conferencing camera supports PELCO-D control protocol to control camera through camera PTZ control port such as RS232/RS485.

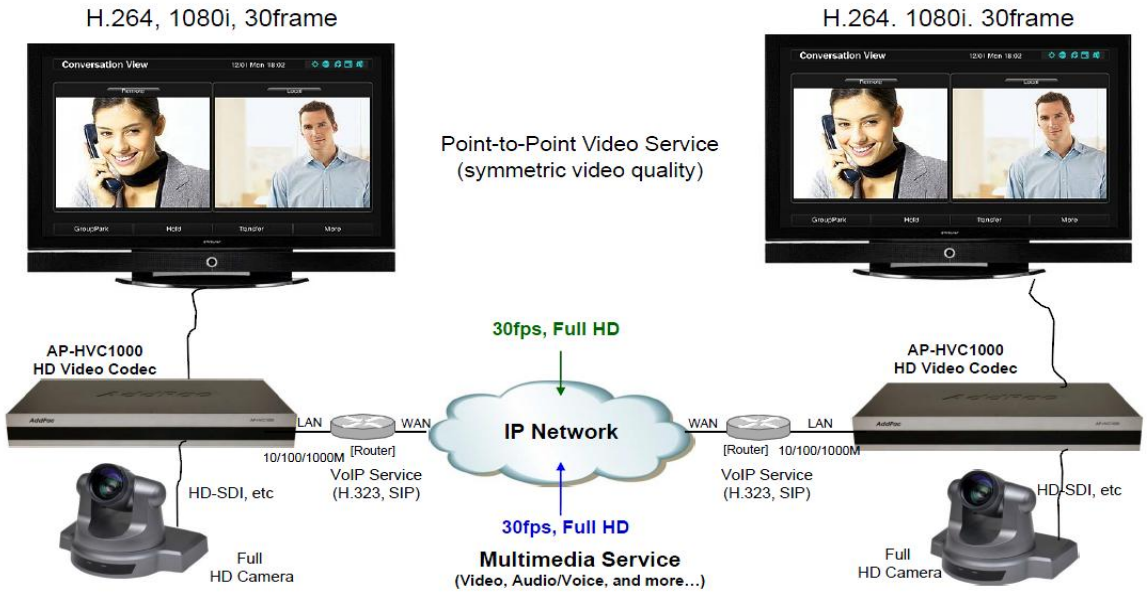
Full HD /HD Video Conference Cameras

Product	AP-HDC50	AP-HDC100	AP-HDC200	AP-HDC300	AP-HDC350
Sensor	CCD	CMOS	CCD	CMOS	CMOS
Optical Zoom	x18	x10	x18	x10	x20
Video Resolution	HD 720P(1280x720)	Full HD 720P, 1080i	HD 720P(1280x720)	Full HD 720P, 1080i	Full HD 720P, 1080i, 1080p
Video Output	HDMI, HD-SDI, Component, RCA	HDMI, HD-SDI, Component, RCA	HDMI, HD-SDI, Component, RCA	HDMI, HD-SDI, Component, RCA	HDMI, HD-SDI, Component, RCA
PTZ Control	Support	Support	Support	Support	Support
PTZ Control Interface	RS232/RS485	RS232/RS485	RS232/RS485	RS232/RS485	RS232/RS485
Power	External Power Adaptor	External Power Adaptor	External Power Adaptor	External Power Adaptor	External Power Adaptor

SD Video Conference Cameras

Product	AP-SDC50	AP-SDC100
		
Sensor	CCD	CCD
Optical Zoom	x27	x37
Video Resolution	D1 (NTSC,PAL)	D1 (NTSC,PAL)
Video Output	CVBS	CVBS
PTZ Control	Support	Support
PTZ Control Interface	RS232/RS485	RS232/RS485
Power	External Power Adaptor	External Power Adaptor

Network Diagram



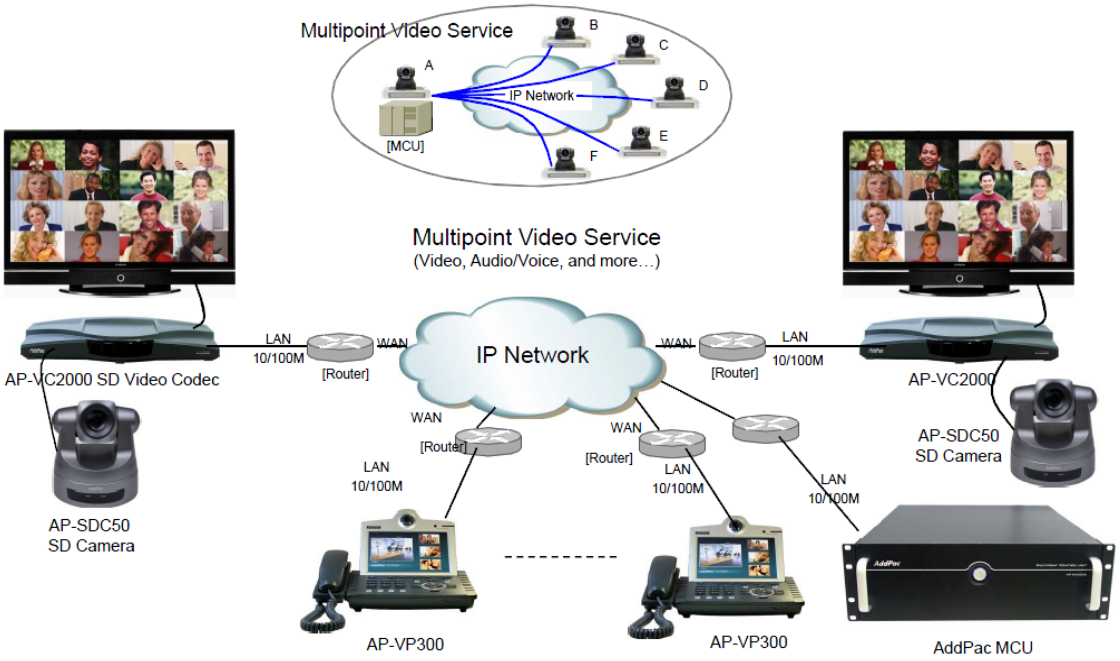
SD Video Conferencing Camera Solution

AddPac Technology SD video conferencing camera lineup is optimized in high quality video conferencing that can be used in various SD level video conferencing environments. AP-SDC50 conferencing camera is high performance 1/4 inch, Double Density Interline Transfer CCD Image Sensor SD camera. It is applicable to conferencing, surveillance and etc. with built-in 27x optical zoom lens. AP-SDC50 high resolution SD conferencing camera supports CVBS analog video interface for external video codec such as H.264 based IP video codec interworking. This allows transmitting NTSC (768(H) x 494(V)), PAL (752(H) x 583(V)) method analog video signal to video codec through CVBS video output interface. AP-SDC100 SD video conferencing camera is high performance 1/4 inch, Double Density Interline Transfer CCD Image Sensor SD camera with built-in 37x optical zoom lens. AddPac Technology conferencing camera supports PELCO-D control protocol to control camera through camera PTZ control port such as RS232/RS485.

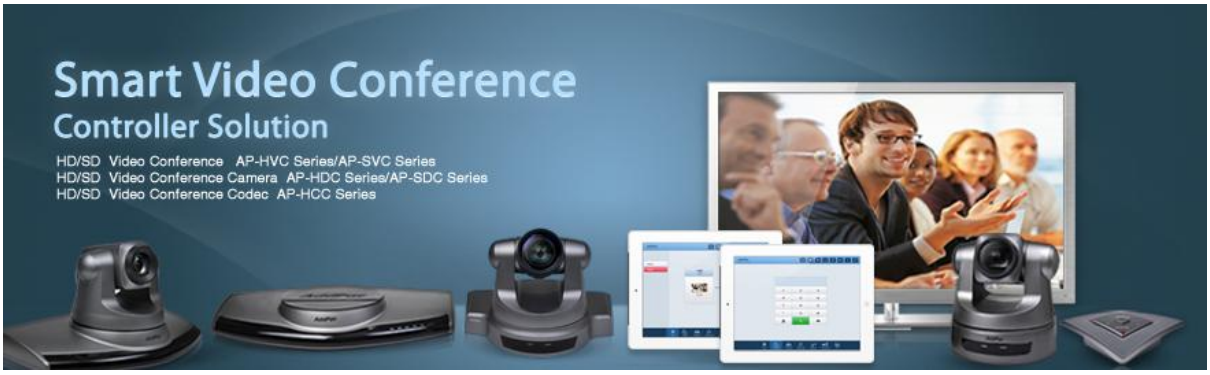
SD Video Conference Cameras

Product	AP-SDC50 	AP-SDC100 
Sensor	CCD	CCD
Optical Zoom	x27	x37
Video Resolution	D1 (NTSC,PAL)	D1 (NTSC,PAL)
Video Output	CVBS	CVBS
PTZ Control	Support	Support
PTZ Control Interface	RS232/RS485	RS232/RS485
Power	External Power Adaptor	External Power Adaptor

Network Diagram



Smart Video Conference Controller Software Solution

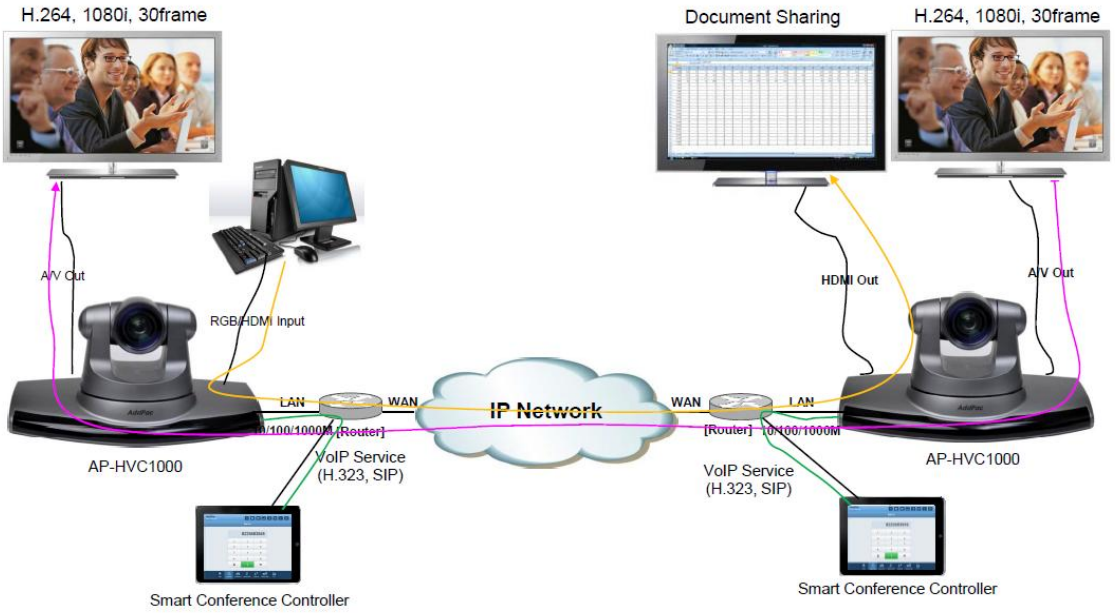


Web based Smart Conference Controller(SCC) is a new management software used for AddPac HD Video Conference Codec devices in the next-generation multimedia telephony solutions of AddPac Technology. AddPac Smart Video Conference Controller is pure Web based Smart Controller for AddPac HD Video Conference System Control. AddPac Smart Video Conference Controller is IP based Remote HD Video Conference System controller using PC(or notebook), Tab, PAD, etc instead of legacy IrDA Remote Controller. This software supports various web browser like as PC(or notebook) based internet explorer, chrome browser, Android based Galaxy tab, Nexus Tab, Safari web browser based Apple IPAD, etc. Landscape Orientation View Mode is optimized on Tab, PAD.

Smart Video Conference Controller Main Function List

Login Home		Phone Books	
Dial Pad		Call Connected Control	
Conference		Camera Control	
Conference Party		Layout Control	
Recent Calls		Speaker Control	
Contacts		PTT (Push-to-Talk) Control	

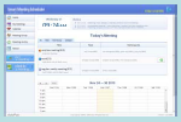
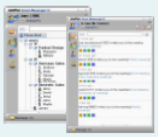
Network Diagram



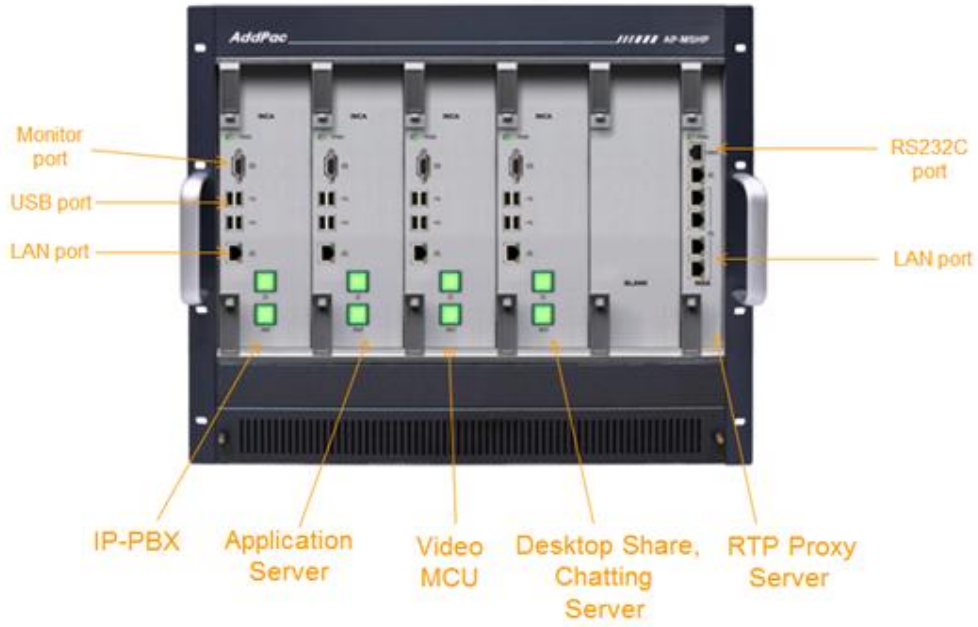
Smart Desktop Meeting Solution

AddPac smart desktop meeting solution consists of AP-SMS100 smart desktop meeting software and smart meeting server such as MCU, call manager etc. AP-SMS100 provides full desktop meeting software solution by using Smart Meeting Scheduler, Smart Meeting Messenger, Smart Meeting Previewer, and Smart Meeting Place software components. AP-SMS100 is new desktop video conference software where Internet audio/video communications are combined with smart meeting servers (IP-PBX, MCU, Chatting Server, RTP Proxy Server, etc). This product provides advanced features and services such as video codecs (e.g. H.263, MPEG-4, and H.264), QoS, SIP VoIP signaling protocol, intelligent smart messenger, SSCP (smart service control protocol: AddPac Proprietary Protocol) for IP-PBX interworking, Video MCU interworking service for video conference. AP-SMS100 is high-performance desktop video conference software where the state-of-the-art video processing technology is added to the voice processing technologies developed by AddPac in the VoIP field. Since AP-SMS100 supports networks of 64 Kbps to several Mbps, it is available at any Internet-enabled place. Above all, AP-SMS100 ensures the best video quality due to the 'rate control' function that ensures the best video quality and frame rate at a limited bandwidth and the high-end error resilience technology for troubleshooting various packet failures on the Internet.

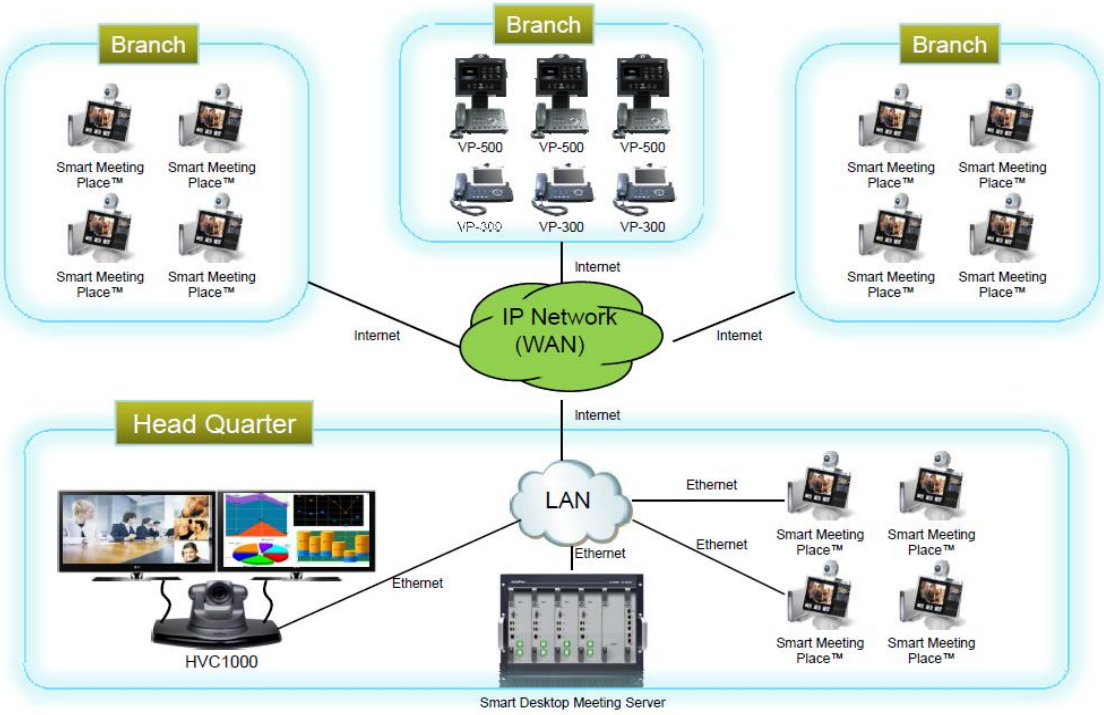
AP-SMS100 Smart Meeting Software Components

	Smart Meeting Scheduler™	• Web based Easy and Intuitive GUI • Start a Meeting Immediately • Schedule a Meeting • Send Invitation E-mail • Join to a Meeting • My Meetings • Calendar • Meeting History, Notice
	Smart Meeting Messenger™	• Receive a Meeting Invite • Receive a Meeting Notice • Start/Preview/Join to a Meeting • Receive Directory • Receive Presence • Edit Phone book
	Smart Meeting Previewer™	• Preview Current Meeting Room • Show Thumbnail Video of Joined Participants • Join to Live Meeting
	Smart Meeting Place™	• HD Video Conference • Audio Conference • Floor, Presenter Control • Layout Control • Desktop Share • Desktop Control • Chatting

Smart Meeting Server



Network Diagram



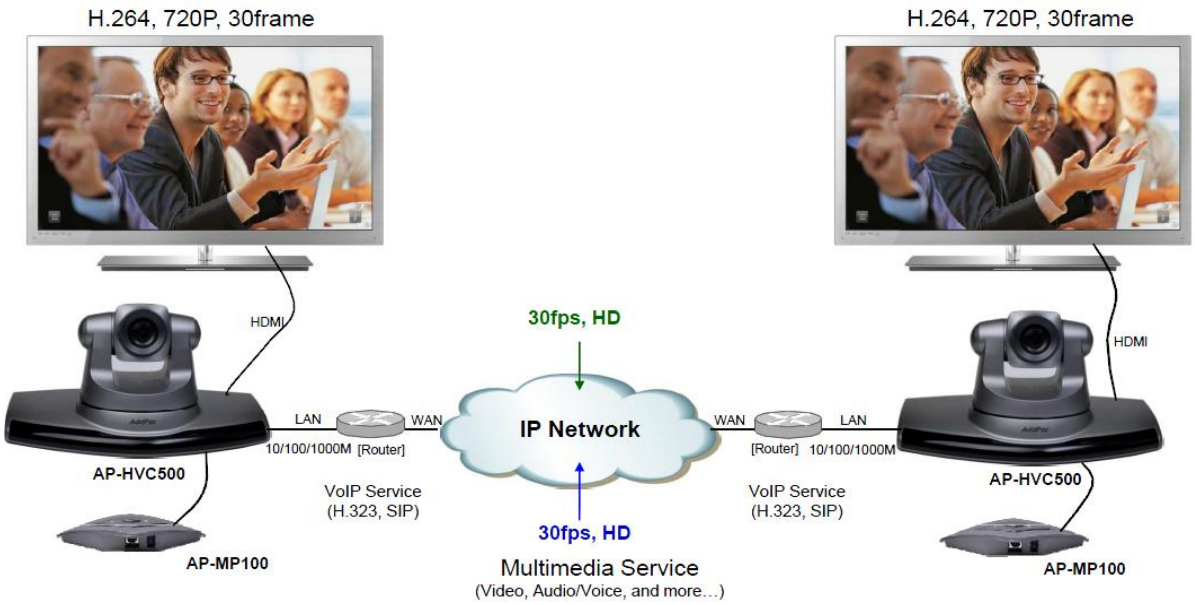
Video Conference MIC Solution

AddPac Technology's microphone for video conference is designed to provide acoustic echo cancellation microphone service for video conference, video telephony service. Especially AP-MP100 is the first released acoustic echo cancelling microphone for video conference. Main hardware features of AP-MP100 microphone are DSP based Echo Cancellation Chip, VAD (Voice Activity Detect) LEDs, Mute Button and Mute Indication LED (red color blinking), Microphone Power ON/OFF switch and Power Indication LAMP, etc. This product can be used as an external microphone of various audio/video devices such as a video conference system, video phone equipment, and is one of key products among total video telephony solution of AddPac Technology. AP-MP100 microphone allows you to make high quality hand-free audio microphone and easy interface with video phone, video conferencing system, desktop PC, note book PC under various environment like as embedded based A/V conferencing, desktop A/V conferencing, web based A/V conferencing. Designed on the foundation of AddPac's field proven voice & video processing technology, AP-MP100 microphone provides the high quality acoustic echo canceling service feature. AP-MP100 microphone covers 360 degree and is designed to detect audio signal incoming from 360 degree service coverage. To give information a user that audio signal is incoming, the detected audio signal from DSP is used to turn on/off yellow color LED. Microphone type like as AP-MP100 can be used in small and medium size A/V meeting room usually.

AP-MP100 View

<AP-MP100 Top View> <AP-MP100 Side View> <AP-MP100 Front View>

Network Diagram



HD IP Broadcasting Solution

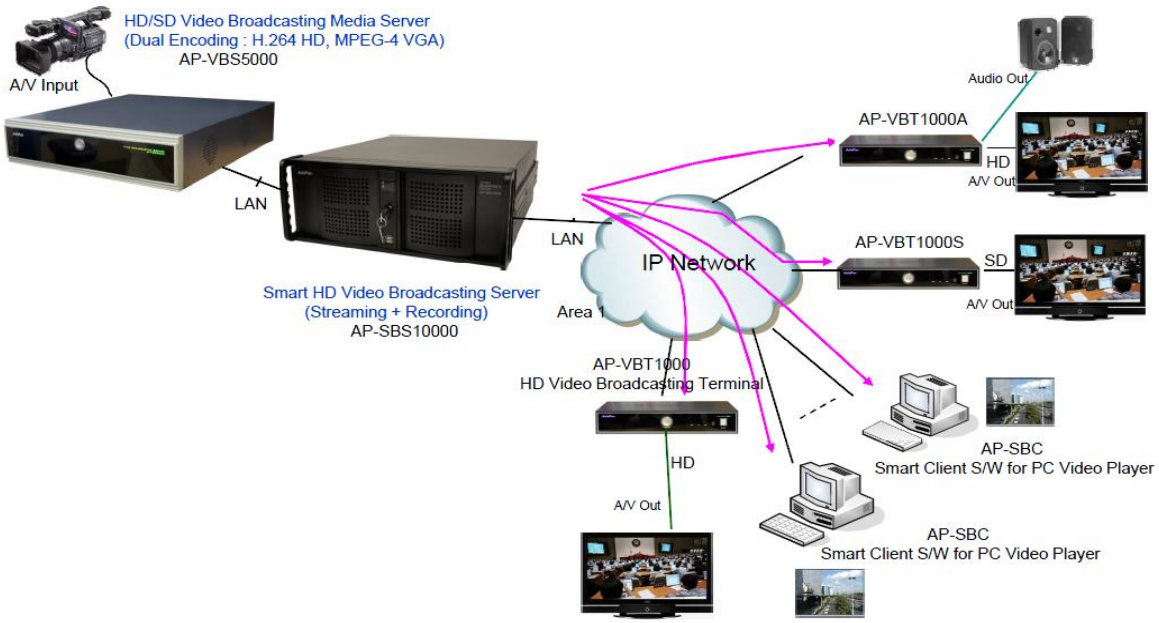
AddPac Technology HD IP video broadcasting solution is composed of HD IP broadcasting media server, HD video broadcasting server and AP-VBT1000HD broadcasting terminal, and AP-MBMS broadcasting management program. AddPac IP media server encode/transmit HD quality video image in real time with DSP hardware and high performance processor. AddPac HD IP broadcasting media server opens a whole new world of high quality images in real time based on an excellent performance and stability. AP-VBS7000, AP-VBS6000, AP-VBS5000, AP-VBS3000 HD video media server, basic component AP-SBS10000 broadcasting server, AP-VBT1000 HD video broadcasting terminal are designed on the basis of hardware codec and high performance RISC CPU based embedded system to transmit/replay the high quality video images in real time.

A compressed video image provides stabilized high quality video images in data integrated network through QoS algorithm. It processes 30 frames of 1080i Full HD, HD (1280X720) images per second with ~15Mbps transmit bandwidth in IP network environment. Especially, a user may setup an appropriate frame rate/bit rate in accordance with network status so it allows accepting from low bandwidth to high bandwidth. AddPac HD IP video broadcasting solution provides following features; IGMP multicast protocol, QoS (Quality of Service), VRRP (Virtual Router Redundancy Protocol) for road balancing. This allows accepting various types of issues more flexibly. AddPac Technology is not only a vender to provide IP based HD broadcasting solution, but it also to provide IP-PBX, VoIP, media gateway, various IP audio/video terminals, external audio/video MCU, video conferencing device, IP audio/video broadcasting, VoD solution, network DVR, audio/video recording solution, and traffic controller QoS device solution. An upcoming ALL IP based multimedia telephony environment must be shared on same IP network. As a result, each integrated solution and entire integrated solution is considered as an important factor. In that sense, AddPac HD IP broadcasting solution will satisfy the needs of customer.

HD IP Broadcasting Media Encoder Comparison Table

	AP-VBS7000	AP-VBS6000	AP-VBS5000	AP-VBS3000
				
Video Codec	H.264 High Profile	H.264 High Profile	H.264 Video Codec, MPEG4	H.264 High Profile
Video Resolution	1080i Full HD, 720P HD	1080i Full HD, 720P HD	H.264 : 720P HD MPEG4 : VGA, QVGA	1080i Full HD, 720P HD
Video Input Interface	HD-SDI, HDMI	HD-SDI, HDMI	Component, HD-SDI, RCA, S-Video, RGB	HD-SDI, HDMI
Audio Interface	RCA Stereo Interface	RCA Stereo Interface	RCA Stereo Interface	RCA Stereo Interface
Channel Number	Up to Ten(10) Video Channel	Up to Four(4) Video Channel	Two(2) Video Support	Up to Two(2) Video Channel
Video Terminal	AP-VBT1000 ,etc	AP-VBT1000 ,etc	AP-VBT1000, AddPac Video Phones	AP-VBT1000 ,etc

Network Diagram



Full HD Video Transmission Codec Solution

A front-runner of video communication AddPac Technology now presents a new vision of full HD video transmission codec. AddPac IP based full HD video transmission solution provides a high quality full HD video and audio broadcasting service in real time. This solution is composed of various multi-slot hardware platforms, AV3500 full HD video broadcasting encoder/decoder module. This AV3500 Full HD video codec module supports HD-SDI, HDMI, analog CVBS input/output using the latest H.264 video codec. AddPac IP video broadcasting transmission device can encode/decode Full HD high quality video by combining with DSP hardware and processor. Especially, AP-NC2000 system is IP based Full HD video broadcasting media transmission device which can install one AV3500 Full HD video broadcasting encoder/decoder module. It receives HD-SDI based Full HD digital video and AES_EBU standard high quality Dolby audio signal through input to perform H.264 video compressed and Dolby Pass-Thru functions. It is applicable to real time full HD video broadcasting fields such as in broadcasting station. AV3500 Full HD video codec is designed to support AES_EBU audio broadcasting transmission standard. It is also designed to transmit a high quality audio signal such as Dolby to the local broadcasting station through HD-SDI. At the sending-end, it extracts formatted Dolby signal (4xAES pair signal which is embedded in HD-SDI digital interface) to retransmit to the IP data. At the receiving-end, it performs to embed the Dolby signal as AES_EBU standard along with video signal. AV3500 embedded video codec module is a state of the art device which can transmit/replay the high quality video images with RISC CPU+DSP based embedded system. A compressed video image by H.264 supports stabilized high quality video in data integrated network through QoS algorithm. It processes 30 frames of full HD 1080i video per second based on H.264 compressed codec standard. Especially, user may setup an appropriate frame rate/bit rate depending on the network status so it accepts from low bandwidth environment to high bandwidth environment.

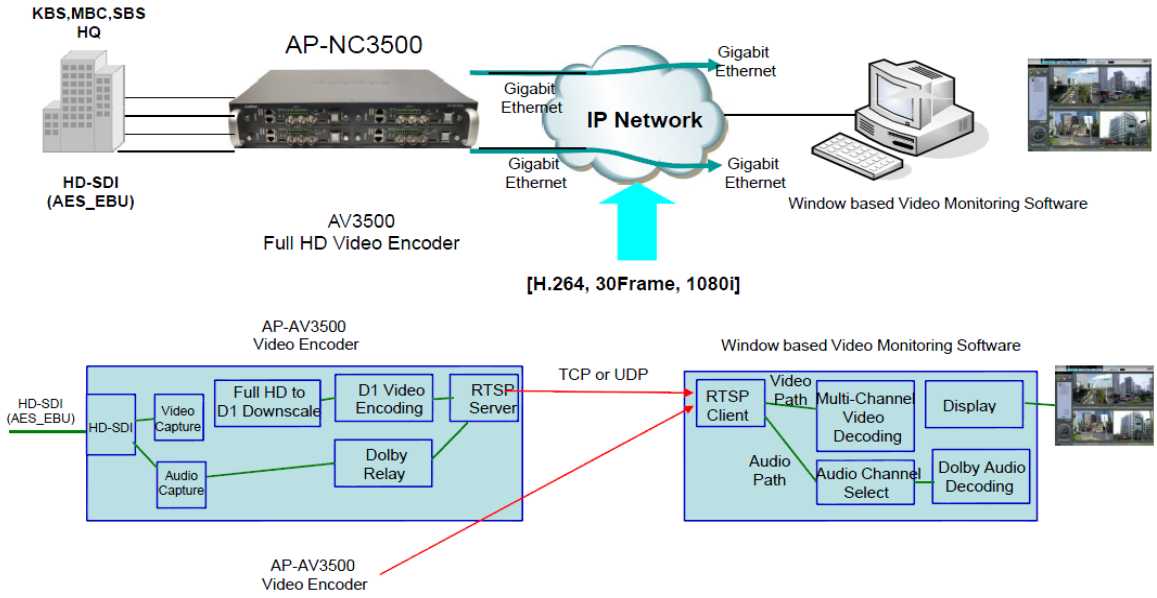
AV3500 Full HD Video Codec Module

AV3500 Specification		
Video	Input	HD-SDI, HDMI, Analog CVS
	Output	HD-SDI, HDMI, Analog CVS
	Format	1080i, 720P, D1(NSTC, PAL)
	Coding	H.264 (HP/MP/BP)
Audio	Input	4 x AES pair in HD-SDI(AES_EBU), 1 x Analog Stereo Pair
	Output	4 x AES pair in HD-SDI(AES_EBU), 1 x Analog Stereo Pair
	Coding	Dolby Pass-Thru(Relay), AAC, G.711, G.726, etc
Network Interface		1 x 10/100/1000Mbps Gigabit Ethernet, 1 x RS232 Interface for Console
Protocol		RTSP (TCP, UDP), RTP

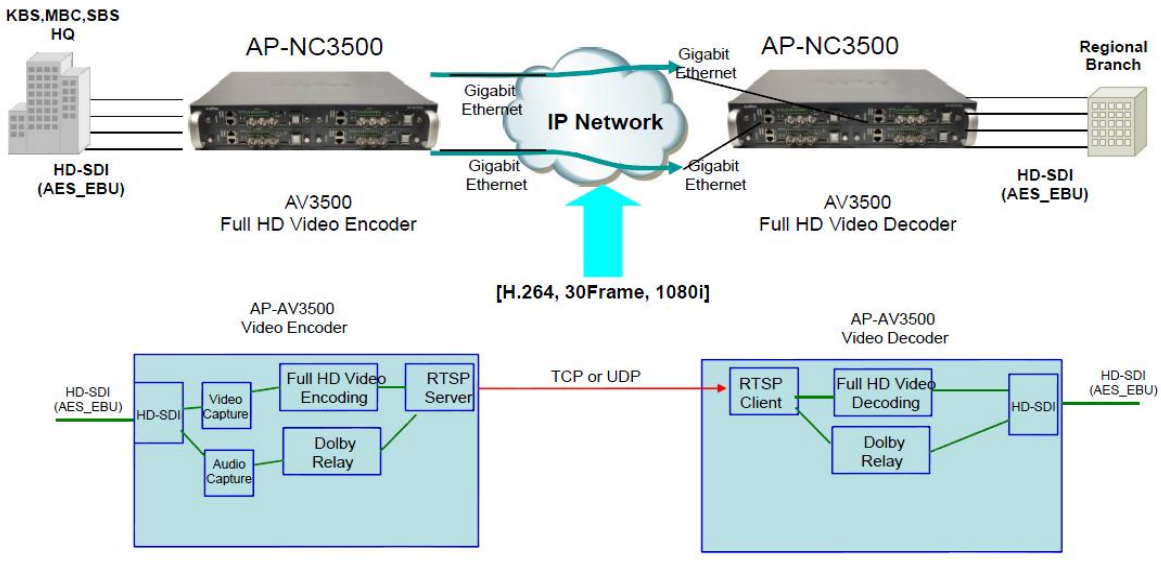
Hardware Platform for AV3500 Full HD Video Codec Module

Model	AP-NC2000	AP-NC3000	AP-NC3500	AP-NC5000
				
Module Slot	1 Module Slot	2 Module Slot	4 Module Slots	10 Module Slots
Power Supply	Internal Power Module(AC)	Internal Power Module (AC)	Internal Power Module (AC)	Internal Power Module (AC)
Power Type	Built-In	Built-In	Built-In	Module Type

Network Diagram



<Network Diagram (Full HD Video Line Extension)>



<Network Diagram (Full HD Video Line Monitoring)>

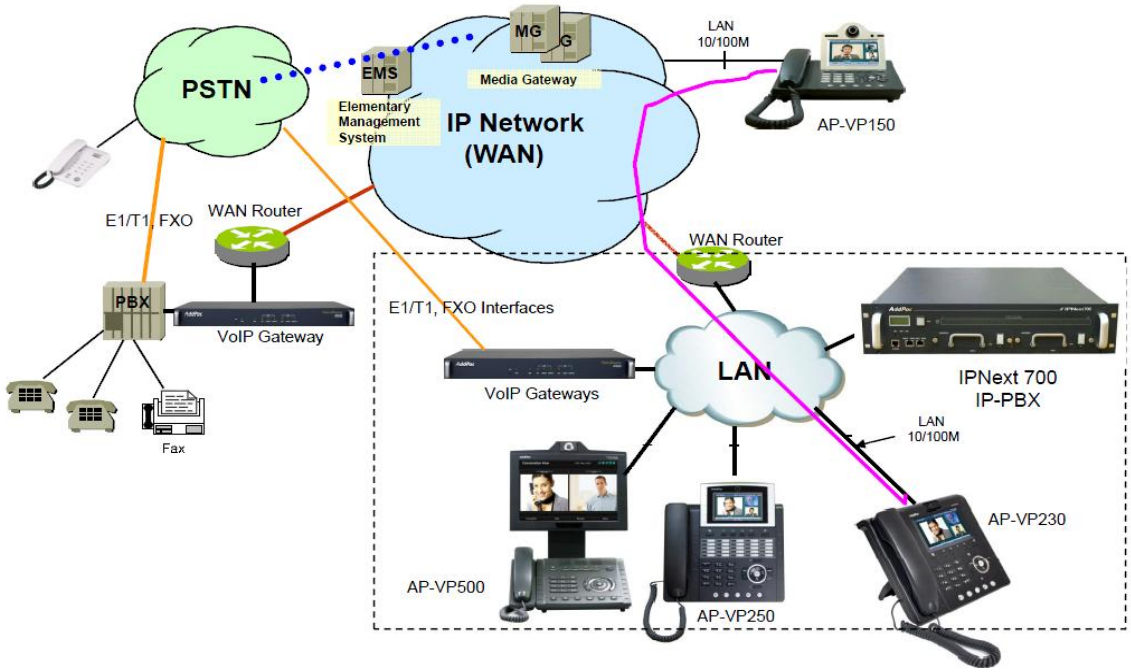
Video Phone Solution

AddPac Technology IP video phone series are designed to deliver high quality video telephony service over IP network. This new and potent video phones deliver the various IP communication solutions taking a full advantage of new 'all-in-one concept' with voice, audio and video application integrated. It provides not only cutting-edge features such as various AV in/out interfaces, QoS functions, public IP sharing but also a wide range of multiple VoIP signaling such as SIP, H.323 protocols and H.263, MPEG4, H.264 video codecs. With its modern design, AddPac Video Phones are equipped with the latest audio/video codec, high quality LCD and Built-In Camera interfaces. From the video conferencing, video telephony to the communication aid for the disabled, AddPac Video Phone becomes the best choice of all.

IP Video Phone Comparison Table

	AP-VP500	AP-VP350	AP-VP300N	AP-VP280	AP-VP250	AP-VP230	AP-VP150	AP-VP120
LCD Size	12.1 Inch Touch Screen	7Inch Touch Screen	7Inch Touch Screen	7Inch Touch Screen	4.3Inch Touch Screen	5Inch Touch Screen	4.3Inch Touch Screen	4.3Inch
Camera	CCD	CCD	CCD	CMOS	CMOS	CMOS	CCD	CMOS
Video Codec	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264
Signaling	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
Video MCU	N/A	4-Party Video MCU	N/A	N/A	N/A	N/A	N/A	N/A
Voice MCU	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party
LAN Port	2	2	2	2	2	2	2	2
PoE	N/A	N/A	Support	N/A	Support	Support	Support	Support

Network Diagram



IP Video MCU Solution

AddPac Technology IP Video MCU(Multipoint Conferencing Unit) series are state-of-the-art equipment for multipoint audio/video conferencing and real-time collaborative IP communications over internet. It is a central processing solution which provides a wide variety of features such as easy and high level conference control, user-friendly management, powerful video decoding/mixing/encoding, transcoding and switching capability through reliable real-time encoding and decoding of transmitted audio data from multiple IP video endpoints such as IP Video Phone, SD/HD Video Conference Equipment, Video Gateway. AddPac Video MCU provides a complete solution specifically for various video conference environment with multiple sites participating which are implemented technically by connecting mixed video data stream from independent terminals to single 'virtual group' for central mixing and transcoding process. Designed on the basis of firmware upgradeable high performance DSP+Processor, AddPac Video MCU supports not only latest audio/video codec currently but has capabilities of new codec services leveraging continuous firmware level upgrade. AddPac Video MCU is also a key component of a comprehensive solution combined with AddPac IP-PBX (especially large capacity, IPNext3000, IPNext10000, etc), IP terminal equipment such as AP-VP300, AP-VP500 IP video phones, HD/SD video conference equipment for multipoint video conferencing, which provides easy-to-use user interfaces, robust performance and excellent video quality.

Central Processing MCU with Robust Performance

Designed on the foundation of parallel DSP architecture + High end Processor for real-time processing, AddPac Video MCU provides a full suit of functionality for rich multipoint video conferencing experience including a wide range of transcoding coverage from voice band G.722, G.711, G.726, G.729, G.723.1, etc audio codec to H.263, MPEG-4, H.264 video codec. Also, AP-MC3000 IP Video Conference MCU support various video conference type like as Meet-me(Dial-in), Ad-Hoc(On-Demand) and Scheduled Video Conference mode.

Multi-Session/Multi-User Video Conference Support

AddPac IP Video MCU is designed to support the multi-session/multi-user video conferencing. For example, if a AP-MC3000 can support the maximum 32 multi-party in case of single session, in case of four(4) session, AP-MC3000 supports the maximum 8 party(user) each concurrently. This feature maximizes the utilization of AP-MC3000 IP Video Conference MCU in large scale enterprise.

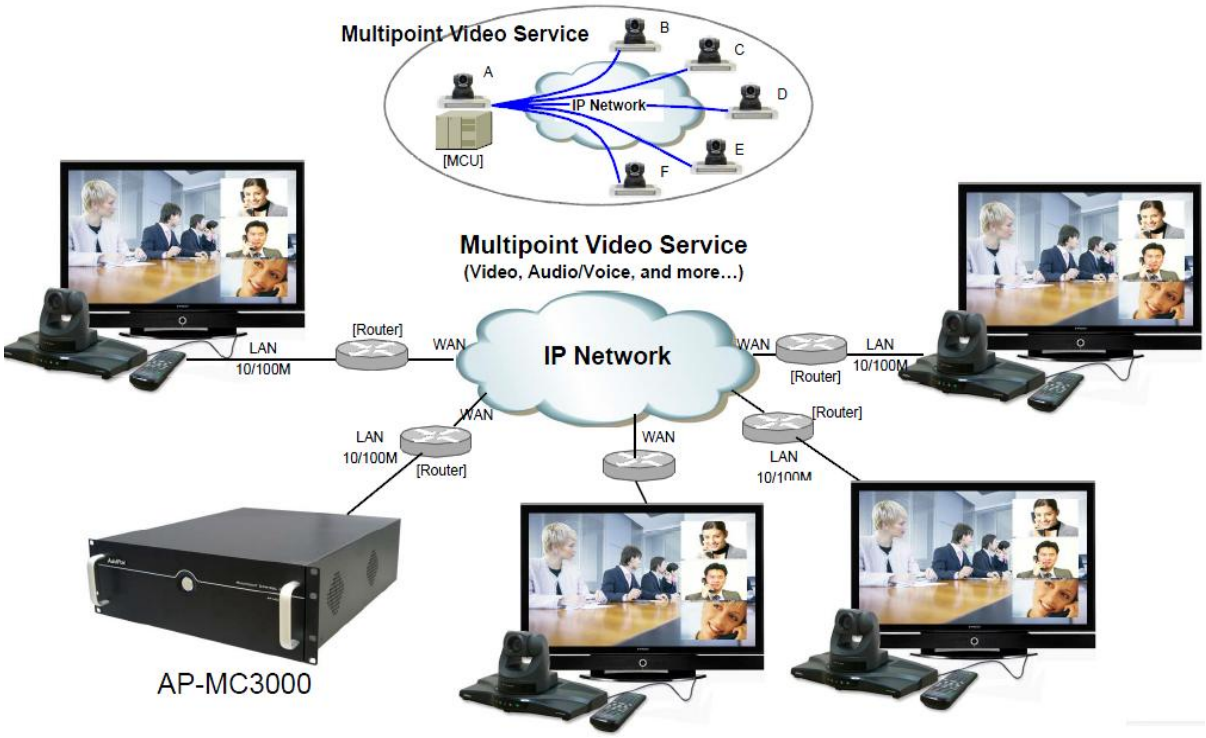
Various Video Display Layout Support

AddPac Video MCU supports various video display layout functions (31 types), dynamic control function, floor function, name display function, boarder display function, etc. The video display layout function is divided as symmetric picture size, asymmetric picture size. According to video conference room size(number of conference participant, for example, 16 party room), AddPac Video MCU provides the various video display layouts. Administrator can select to a video display layout among the multiple video display layouts via AP-MC3000 manager program. When a new video conference is started, users can choice a specific video layout automatically or manually. Dynamic control function is used when video display layout is changed dynamically or conference participant is move out/in during video conferencing.

IP Video MCU Comparison Table

	AP-MC5000	AP-MC3000	AP-MC2000	AP-MC1800
				
Video Codec	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264
Signaling	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
Voice Codec	G.722/G.711/G.726/ G.729/G.723, etc	G.722/G.711/G.726/G. 729/G.723, etc	G.722/G.711/G.726/G. 729/G.723, etc	G.722/G.711/G.726/G.72 9/G.723, etc
Party Number	64	32	16	4/8
Multi-Session	Support	Support	Support	Support
Conference Mode	Add-Hoc, Dial-Out, Meet Me	Add-Hoc, Dial-Out, Meet Me	Add-Hoc, Dial-Out, Meet Me	Add-Hoc, Dial-Out, Meet Me
H.323 GateKeeper	Support	Support	Support	Support
Conference Video Recording	Support	Support	Support	Support
LAN Port	2	2	1	1
Power Duplication	Support	N/A	N/A	N/A

Network Diagram



Video Conference Recording Solution

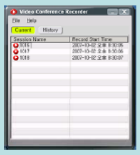
PC based Smart Video Conference Recorder (SVCR) is a multi-session video recording software used for multimedia video conference solutions of AddPac Technology. AddPac smart video conference recorder is a MS-window based digital video conference recording (audio/video) solution for AddPac video MCU such as AP-MC3000. This software supports the multi-session video conference recording and display multi-video session. By double clicking the video session, it can play the live video session stream during video session recording. Also, this software supports recorded video conference file playback. Video conference recording stream generated in video MCU is transmitted to smart video conference recorder software on desktop PC. Smart video conference recorder software use the real-time RTP(real-time transport protocol) protocol for transporting video stream between MCU and SVCR.

Video Conference Recorder S/W

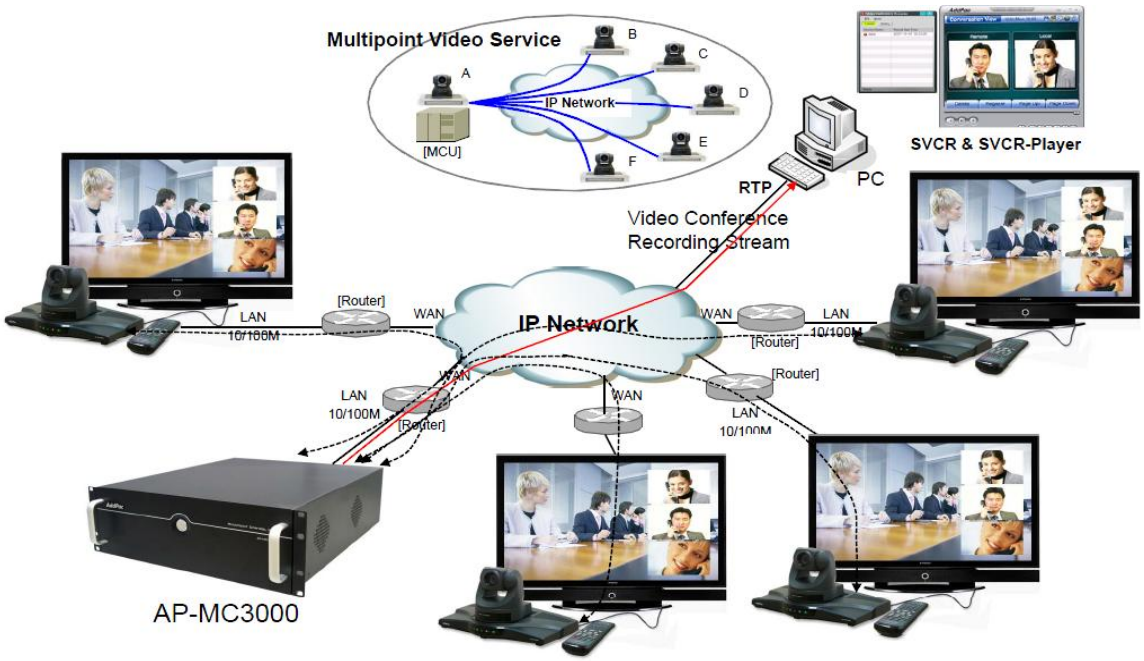
Smart Video Conference Recorder

SVCR-Player

Video Conference Recorder S/W Function List

 SVCR	Video Conference Recording in PC Local Storage
	Multi-Session Recording
	Recording Video in PMA (AddPac Proprietry Format) File Format
	History Function of recorded Conference Session
	MS-Window Application
 SVCR-Player	Live Session (Stream) Play
	Multi-Session Play
	Random Access in Playing Live Session
	Recorded File Playback
	High-performance Audio & Video Codec Support Up to 30 frame/sec, MPEG-4(QVGA, VGA<future>)
	MS-Window Application

Network Diagram



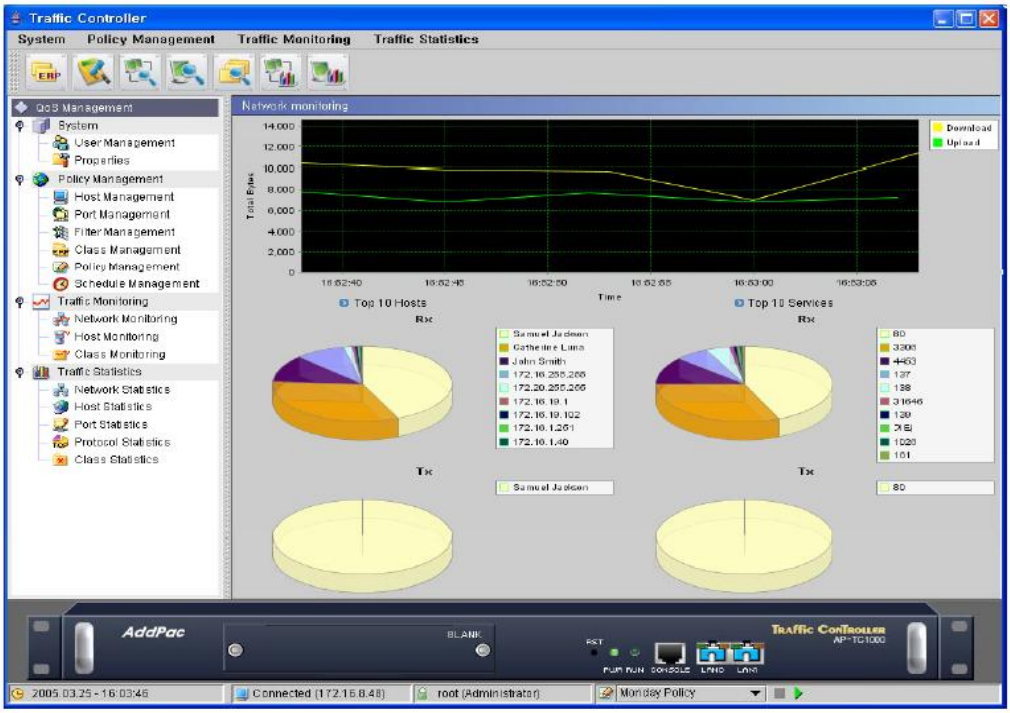
Enterprise Traffic Control Solution

AddPac, an industry leader in the development, manufacture, and marketing of extended range VoIP, Mobile, IP Telephony, Video Conference, IP broadcasting solutions, has developed complete performance oriented solution. Enterprise traffic control solution AP-TC1000 traffic controller is one of them. This traffic control solution is for QoS policy management, process/resource allocation, traffic monitoring/analyzing, traffic shaping and traffic prioritizing. It features two(2) port 10/100Mbps Fast Ethernet interface and one(1) multiservice slot for various network modules. AP-TC1000 provides the service providers with the most technically advanced policy based traffic management helping them guarantee performance for their business critical applications. Combined with diverse AddPac's VoIP, Video, IP telephony solutions, it enables the enterprise customers to achieve the easy and efficient traffic management and bandwidth optimization leveraging the richest QoS service. The collaborative IP communications such as VoIP, IP based video services are rapidly emerging as the future of communications expanding their market as customer's demand grows. Now more than ever, while service quality is getting crucial, questions still remain on the quality in broadband network to carry heavy volume traffic for various business critical applications integrated with hardware type video conferencing equipment, video phone, IP broadcasting equipment, network DVR equipment. Through the use of AddPac's advanced, policy based bandwidth management technology, AP-TC1000 delivers ideal QoS solution for the high-end IP communication application ensuring reliable and consistent service quality in a mixed, real network. AddPac AP-TC1000 features LAN-to-LAN QoS routing using two(2) Fast Ethernet and optionally provides modular type WAN interface QoS router function. WAN interface modules that AP-TC1000 provides are V.35(1-port, 2-port, 6-port) interface, ATM(E1/T1, DS3, OC-3) interface and POS(DS3). AP-TC1000 supports IPv4/IPv6 dual stack and various basic routing protocols such as Static, RIP, RIPng, OSPFv2/v3, BGP4.

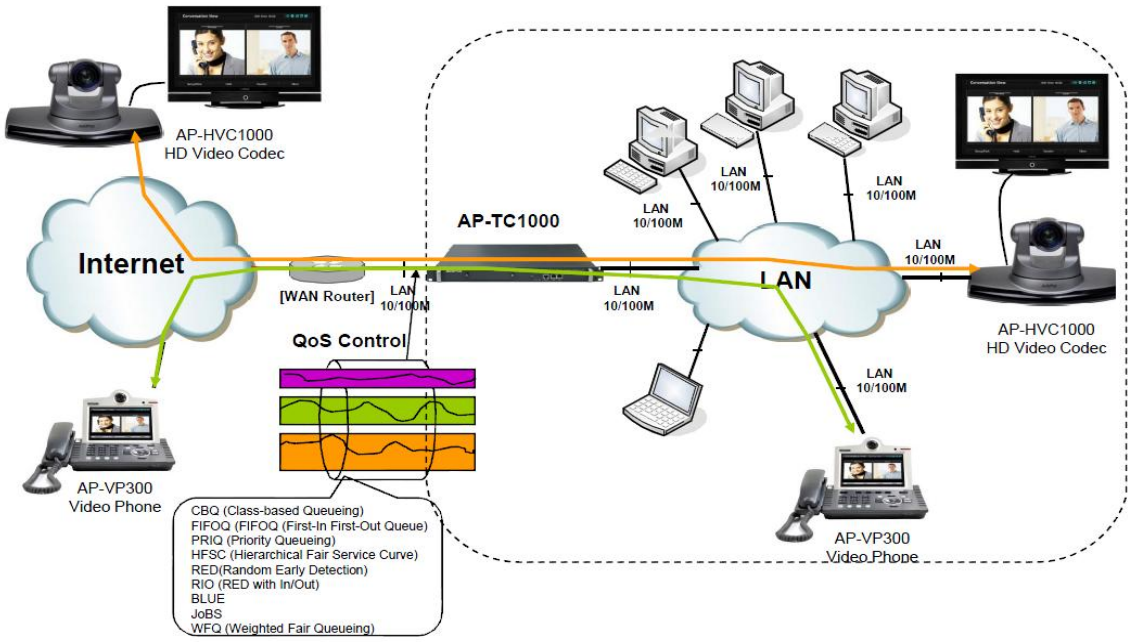
QoS Service and Features

Queuing and Traffic control	CBQ (Class-based Queuing)
	FIFOQ (FIFOQ (First-In First-Out Queue)
	PRIQ (Priority Queuing)
	HFSC (Hierarchical Fair Service Curve)
	RED (Random Early Detection)
	RIO (RED with In/Out)
	BLUE
	JoBS
	WFQ (Weighted Fair Queuing)
ECN (Explicit Congestion Notification) RFC3168 support	Packet marking/remarking (DSCP, ToS, Precedence)
	ECN support in TCP
	Fragment/tunnel handling in IPv4/IPv6

QoS Service and Features



Network Diagram



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