AP-MC3000 High Performance Video MCU

AP-MC3000 is a central video 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, Video Conference Equipment, Video Gateway. AP-MC3000 provides a complete solution specifically for medium size video conferences 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 + Host Processor, AP-MC3000 supports not only latest audio/video codec currently but has capabilities of new codec services leveraging continuous firmware level upgrade. AP-MC3000 is also a key component of a comprehensive solution combined with AddPac IP-PBX (especially large capacity, IPNext5000, IPNext10000, etc), IP terminal equipments such as AP-VP500, AP-VP300 IP video phones, AP-HCC1000, AP-HVC1000 video conference equipments for multipoint video conferencing, which provides easy-to-use user interfaces, robust performance and excellent video quality.

AP-MC3000 MCU system for multipoint video conferencing features two(2) Gigabit Ethernet interfaces, a RS-232C console port for maintenance. AP-MC3000 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. AP-MC3000 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.

AP-MC3000 IP Video conference 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), AP-MC3000 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.

Main Features

- **AP-MC3000 is a video conference MCU equipment that allows you to build a multimedia system in order to integrate voice, audio, and data based on video communications.**

- **Supports the state-of-art codec algorithm for voice and audio services as well as video codecs such as H.263, MPEG-4, and H.264.**

- **Various Video Resolution Support : QCIF, CIF, QVGA, VGA, 4CIF, 720P(1280x720) Full HD (1920x180) Option**

- **Various Video MCU Display Layout Support**
  - 31 Types (Symmetric, Asymmetric)
  - Auto , Manual Mode

- **Dynamic Session Management Support**

- **Voice Activity Switching or Voice Detect Switching Support for Dynamic Participant Display**

- **Floor Function, Name Display, Border Attribute Support**

- **Personal Picture Control (Codec, Picture Size,etc)**

- **Virtual Audience Support**

- **Meet-Me, Add-Hoc, Dial-Out Video Conferencing Signaling Support.**

- **SIP, H.323 VoIP Signaling Support**

- **Ensures the best voice quality on a regular IP-based Internet network that provides an asymmetrical bandwidth.**

- **Two(2) Gigabit Ethernet Interface Support**

- **Provides the USB Interface for Wireless LAN, USB Memory, etc**

- **Allows you to set up configuration and your network environment by MS-Window based Smart Multimedia Manager S/W**

- **Supports Smart Video Conference Recording Solution (PC, MS-Window based Multisession Video Conference Recording S/W): Option**

- **Ensures extensibility, reliability, and authenticity since the APOS inter-networking software of AddPac is installed.**

AP-MC3000 Applications
- **IP Video conferencing system**
- **IP multimedia telephony solution**
- **Telepresence Solution**

General Hardware Specifications

CPU	High Performance Processor + DSP Architecture
Memory	1 Giga DDR2 SDRAM
Network Interface	2-ports 10/100/1000Mbps Gigabit Ethernet (LAN 0, LAN 1)
Console Interface	1-port RS-232C Console Interface
IR interface	IR Input interface for AP-VC5000 Control
	IR Output interface for External TV Control
Operation Environment	Temperature 0℃ ~ +45℃(operating), -40℃ ~ +85℃ (storage), Humidity 5% ~ 95%
Power Supply	AC110~220VAC 50/60Hz Free Voltage

Video Display Layout

Video Display Layout	**31 Layout Types (Symmetric, Asymmetric Layout) Auto, Manual**
Dynamic Session Control	**Dynamic Layout Change**
	Dynamic Participant Movement
Floor Function	
Name Display Function	
Boarder Function	

Audio Service and Signaling Protocol Features

Voice and Audio Codec	G.711, G.723.1, G.726, G.729, G.722, etc
VoIP Signaling Protocol	SIP/H.323 VoIP Signaling Protocol (Dual Stack)
	ITU-T H.323 Gateway, Gatekeeper Support
	SIP Proxy Server Interoperability
Voice Processing	VAD, CNG, Dynamic Jitter Buffer Operation
DTMF	Detection and Generation, RFC 2833 Compliant
Voice QoS	Enhanced QoS Management for Voice Traffic

Video End-Point Control

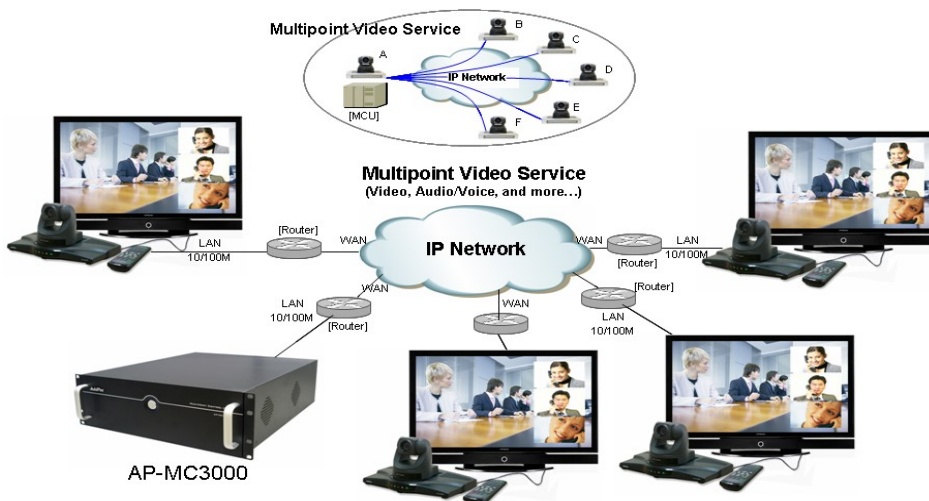|	
Personal Picture Control	**Codec, Picture Size ,etc**
Personal Layout Control	
Dynamic Participant Display	Voice Activity Switching (Voice Detect Switching)
	Remote Control (Remocon)
MIC Mute	Turn Off MIC of a invisible participant
Forced Mute (audio, video)	Can mute Audio/Video of a participant (Video Phone)
Virtual Audience	Broadcasting Solution
Dial-in	Even in Dial-out started video conference, can join the Video conference if a participant knows the conference Room number in outside.

Video MCU Services and Features

Video Codec	H.263, H.263+ , MPEG4, and H.264 (MPEG4 part 10)
Video Format	QCIF(176x144), CIF(352x288), 4CIF(704x576), QVGA(320x240),VGA(640x480), 720P(1280x720), Full HD (1920x1080)
Operating Bandwidth	256bps ~ 15 Mbps
Video QoS Features	Enhanced QoS Management for Video Traffic
	High-end Error Resilience Support on IP Network
	Rate Control for Best Video Quality
	Frame Rate Control at a Limited Bandwidth
	Video Error Concealment Service
Conference Signaling	Meet-Me, Add-Hoc, Dial-Out Conferencing Signaling Support, and Control by GUI based Smart Multi-media Manager (SMM) Software
VoIP Signaling	SIP, H.323 VoIP Signaling Support
Document Sharing	H.239 Document Signaling Support
Video Codec Interoperability	Polycom, Tandberg, and Sony Video Conferencing Products with Standard H.323, H.263 based Video Codec, and so on
Control and Setting	Smart Multimedia Manager Software (MS window)
Video Conference Recording	Smart VCR(Video Conference Recording) Software (MS Window) : Option
Major Video Application	Voice and Video Telephony, Video Conferencing, Audio/Video Broadcasting, VoD Service, etc.

WAN, LAN, IP Services and Other Features

WAN Protocol	Point-to-Point Protocol (PPPoE) for ADSL
IP Routing	IPv4 and IPv6 Dual Stack Routing, Static and IEEE 802.1Q VLAN Routing, various IP Routing Support
Network Management	Standard SNMP Agent (MIB v2) Support, Console, Telnet, Remote Firmware Upgrade via FTP/ TFTP Support
Security Features	IP Packet Filtering, Access List, Access Control and Data Protections, Enable/Disable for Specific-Protocols Multi-level User Account Management
Operation & Management	Configuration Backup and Restore Management, Debugging and Diagnosis Features, System Booting/Rebooting through Watch-Dog, etc.
Other Features	DHCP Server and Relay, Network Address

Network Diagram

AP-MC3000

Ordering Information

- AP-MC3000   High Performance Video MCU
- CAB-LAN   Ethernet Cable
- CAB-CON   RS-232C Console Cable
- SMM S/W   Smart Multimedia Manager S/W
- SVCR (Option)   Smart Video Conference Recording   S/W