

# AP-HCC2000

## MCU Built-In Two(2)-Channel Full HD Video Conference Codec

High Performance MCU Built-in Full HD Video Conference Solution



AP-MP100  
AEC Microphone



AP-HCC2000  
Full HD Video Codec



AP-HDC100  
Full HD  
Camera

### Product Overview

(Without notice, following described technical spec. can be changed)

# **AddPac**

## **AddPac Technology**

### Sales and Marketing

# Contents

- Product Overview
- Benefits and Features
- Hardware Specification
- HD Video Conference Camera
- AEC Microphone
- Multimedia Service
- Software Service
- Network Service and Features
- OSD Software Features
- Application Area
- Ordering Information



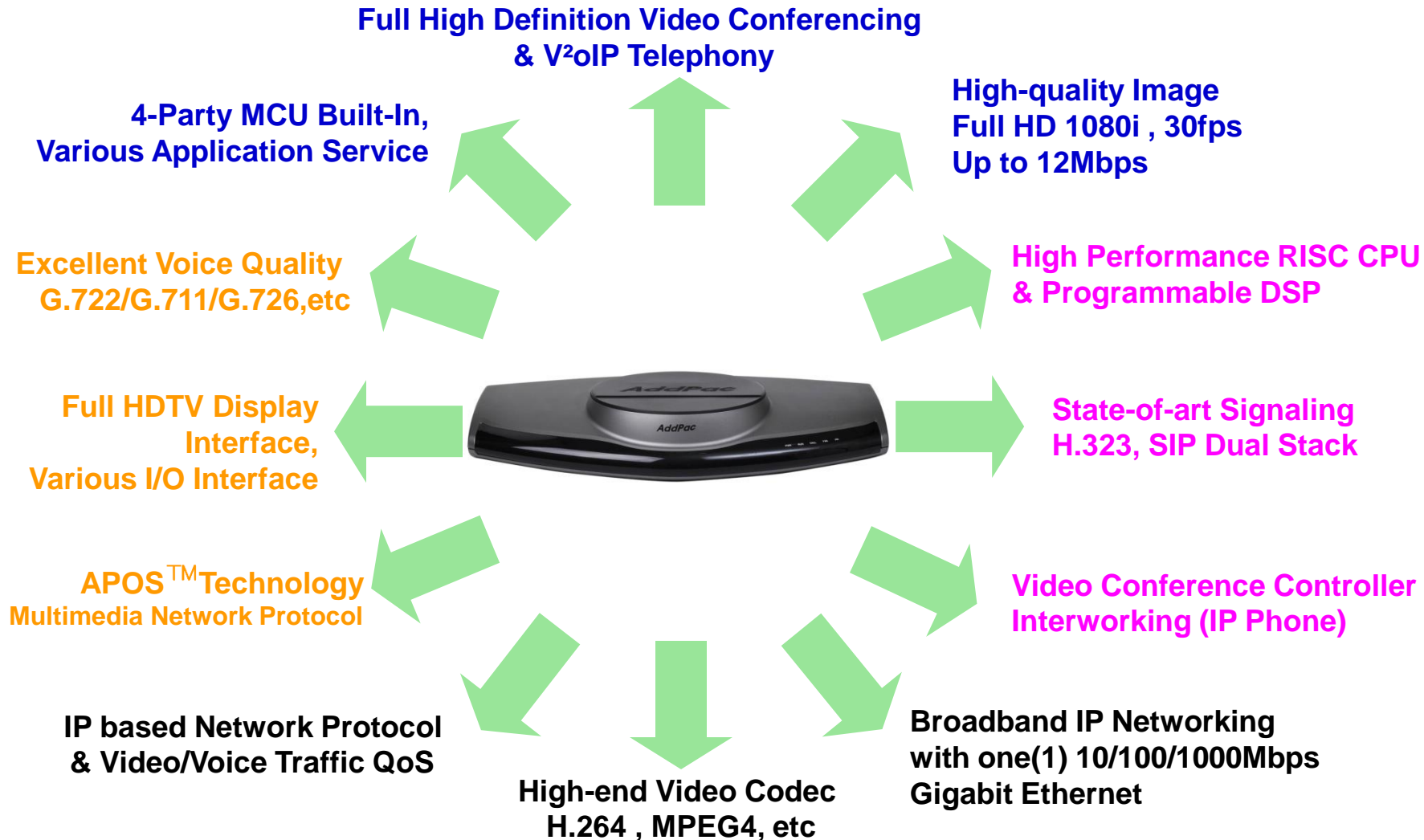
# Product Overview

## AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- IP based Video Conference Solution
- High-End Full HD Video Conference Codec Features
- Two(2)-Channel Full HD Video Conference Codec
- 4-Party MCU Built-in
- External Full HD Video Conference Camera (ex: AP-HDC100)
  - CMOS Sensor, 2Mega Pixel Camera
  - Various Video Format Support ( ex;1080i/59.94)
  - PAN/TILT/Zoom Housing Features
  - Optical 10 x Zoom, Digital 12 x Zoom Camera
  - Built-in Wide Angle Lens for Video Conference
- External Acoustic Echo Canceller Microphone (AP-MP100)
- High-performance Video, Audio, and Voice Service
- Flexible Videoconferencing Deployment
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection

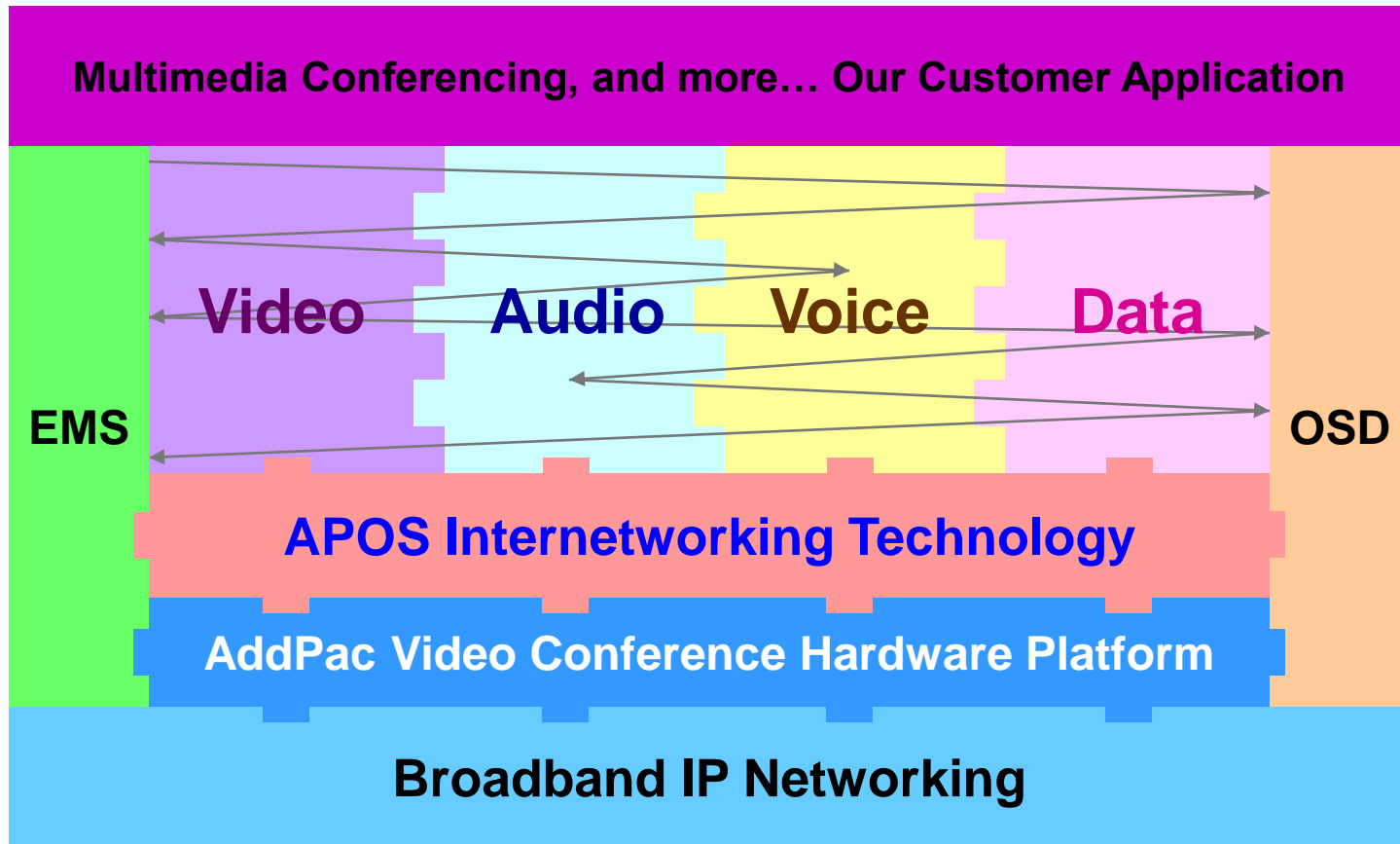
# Product Highlights

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec



# Multimedia Service

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec



- APOS : AddPac Internetworking Operating System
- OSD : On- Screen Display
- EMS : Element Management System

# Benefits and Features

## AP-HCC2000 Full HD Video Conference Codec

- Various Video Input/Output Interface
  - Composite (RCA) , Component (Y, Pb, Pr), HDMI, HD-SDI
- High-performance Video Codec Support
  - H.264, MPEG4, etc
- Powerful Image Resolution Support
  - CIF(352x288), QVGA(320x240), HVGA(640x240), VGA(640x480), 4CIF(704x576), 720P(1280x720), 1080i(1920x1080)
- Up to 30fps with Full HD-Resolution(H.264)
- 4-Party MCU Built-In
- SIP, H.323 Signaling Support
- Rate Control for Video Traffic QoS
  - Ensuring Optimized Quality
  - Frame Rate with Limited Bandwidth
- High-end Error Resilient Against Various Packet Error

# Hardware Specification (AP-HCC2000 Full HD Codec)

# Hardware Specification

## AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

High  
Performance  
**CPU**

High-end  
**DSP**

- High Performance RISC Computing Power
- High-end Programmable DSP Hardware Architecture
- CH#1 I/O Interface

|              |                                         |
|--------------|-----------------------------------------|
| Video Input  | Composite RCA, HD-SDI, HDMI             |
| Video Output | Composite RCA, Component , HDMI         |
| Audio Input  | Stereo RCA Type Audio Input             |
| Audio Output | RCA Type Audio Output (Left, Right)     |
| PTZ Control  | RS-232C Pan/Tilt/Zoom Control Interface |

- CH#2 I/O Interface

|              |                                         |
|--------------|-----------------------------------------|
| Video Input  | Composite RCA, HD-SDI, RGB, HDMI        |
| Video Output | Composite RCA, Component , HDMI         |
| Audio Input  | Stereo RCA Type Audio Input             |
| Audio Output | RCA Type Audio Output (Left, Right)     |
| PTZ Control  | RS-232C Pan/Tilt/Zoom Control Interface |



# Hardware Specification

## AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- Network Interface
  - One(1) 10/100/1000Mbps Gigabit Ethernet(RJ45)
  - One(1) RS-232C Interface (RJ45) for Console
- USB Interface
  - USB 2.0 Interface for Mouse, etc
- Voice Interface
  - FXS Interface for Analog Phone, Analog Conference Phone, etc
- External Power Input Connector
- External IrDA Connector
- Power On/Off Switch

# Full HD Video Conference Camera






# HD Video Conference Camera

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- Full HD Camera Specification
  - High-end CMOS Camera Sensor
  - 2Mega Pixel
  - HD : 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, etc
  - Auto Focus 10 x Optical Zoom, 12 x Digital Zoom
  - Wide Angle Lens for Video Conference Application
  - PELCO-D Control Protocol
  - Position Preset

# HD Video Conference Camera

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

| 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<br>720P(1280x720)                                                              | Full HD<br>720P, 1080i                                                            | HD<br>720P(1280x720)                                                               | Full HD<br>720P, 1080i                                                              | Full HD<br>720P, 1080i, 1080p                                                       |
| Video Output          | HDMI, HD-SDI,<br>Component, RCA                                                   | HDMI, HD-SDI,<br>Component, RCA                                                   | HDMI, HD-SDI,<br>Component, RCA                                                    | HDMI, HD-SDI,<br>Component, RCA                                                     | HDMI, HD-SDI,<br>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<br>Adaptor                                                         | External Power<br>Adaptor                                                         | External Power<br>Adaptor                                                          | External Power<br>Adaptor                                                           | External Power<br>Adaptor                                                           |

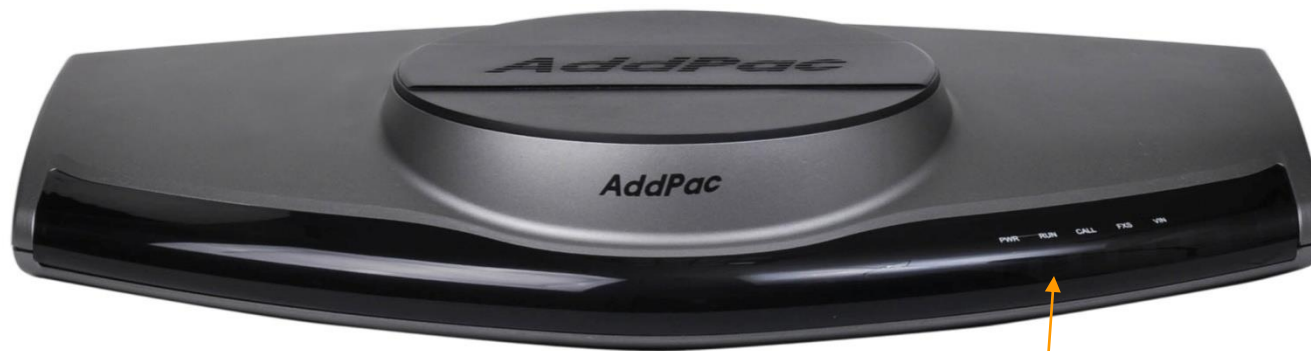
# Hardware Specification

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

High  
Performance  
CPU

High-end  
DSP

## Front Side



IR Sensor & Status Indication Area

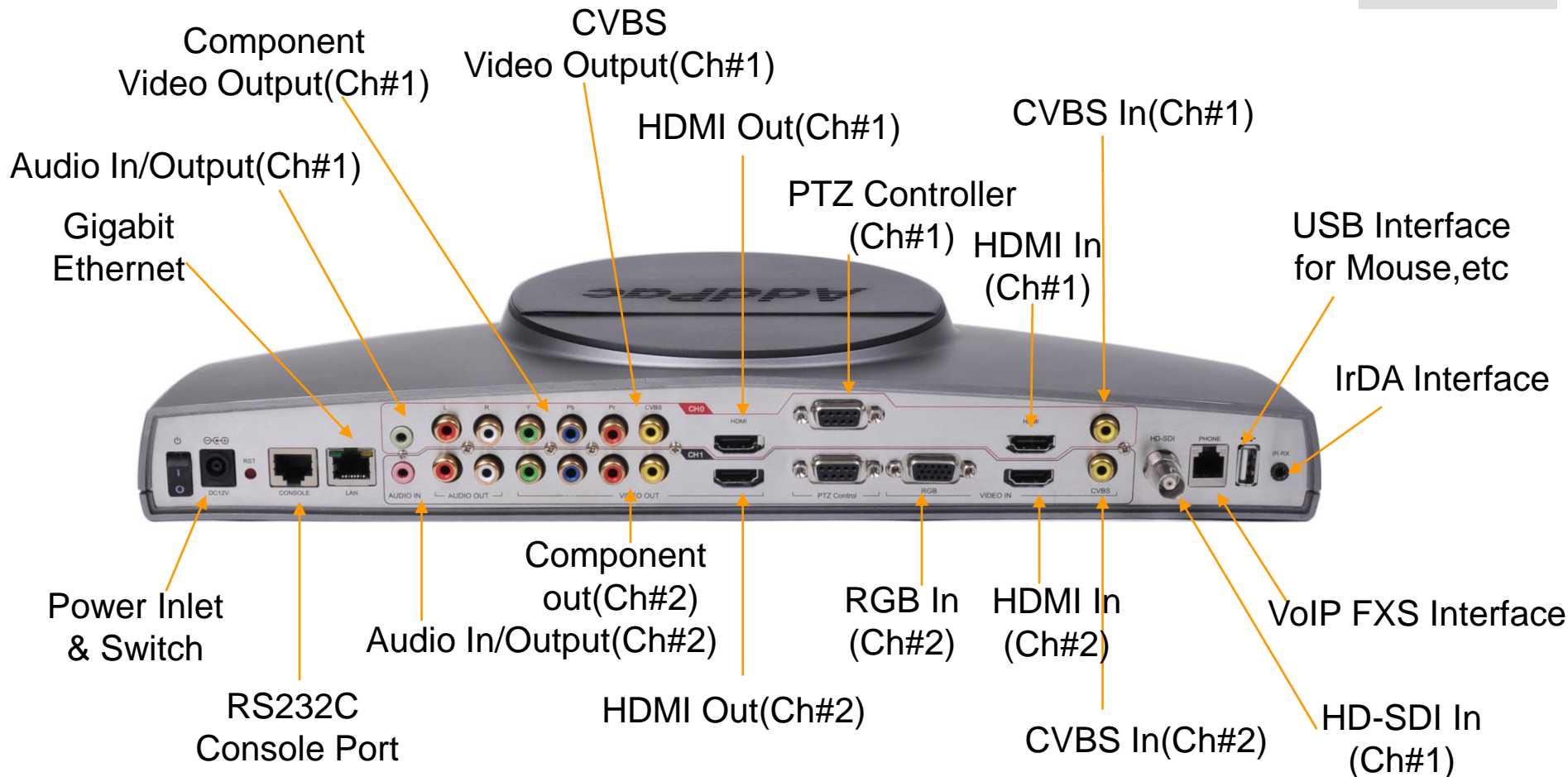
# Hardware Specification

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

High Performance  
**CPU**

High-end  
**DSP**

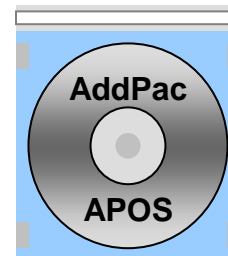
## Back Side



# Software Service

## AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

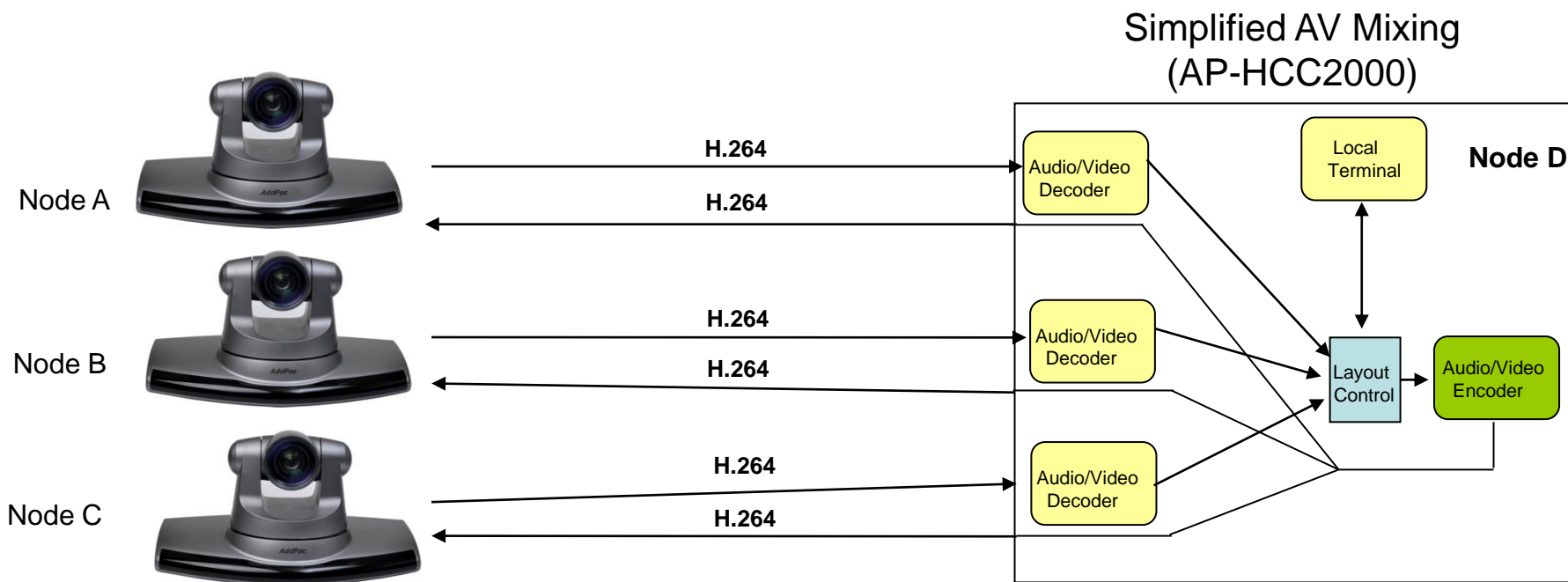
- Built-in APOS Internetworking Software
  - Scalability, Functionality, and Stability Features
  - Video Traffic QoS Control
- Programmable Video, Audio, and Voice Services
  - Video Codes, Audio, and Voice Codec
- Firmware Upgradeable Architecture
- OSD (On-screen Display) Function Support
- Industry Standard IP based Network Protocol Features



# MCU Service and Features (cont..)

## AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- Simplified AV Mixing Model
- Video Codec : H.264, etc
- Voice Codec : G.711, G.729, etc
- Asymmetric Rate Control between Encoder & Decoder
- Same Conference Layout for All Party

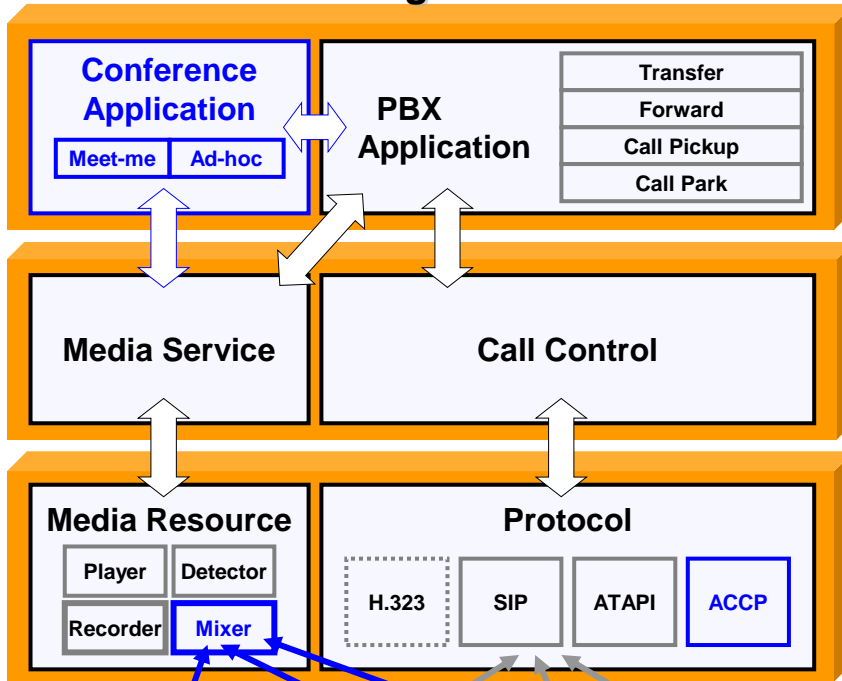




# MCU Service and Features (cont..)

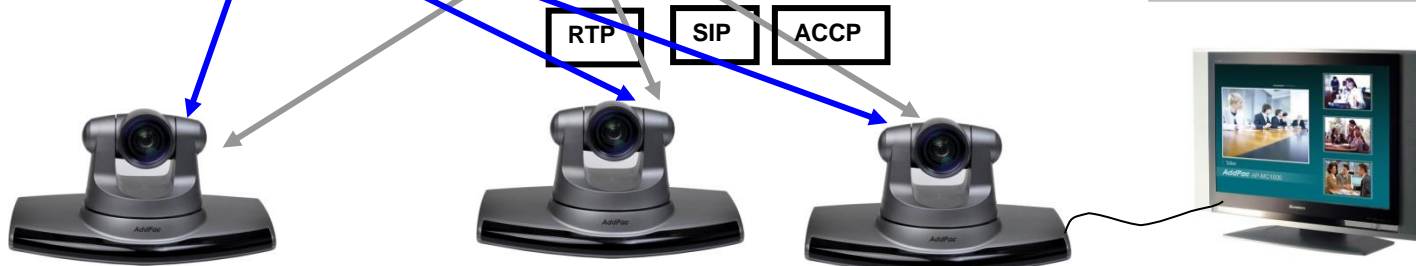
AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

## Call Manager + MCU



## MCU Integrated Model

- \* ATAPI - AddPac Telephony API
- \* ACCP - AddPac Client Control Protocol



**AddPac**

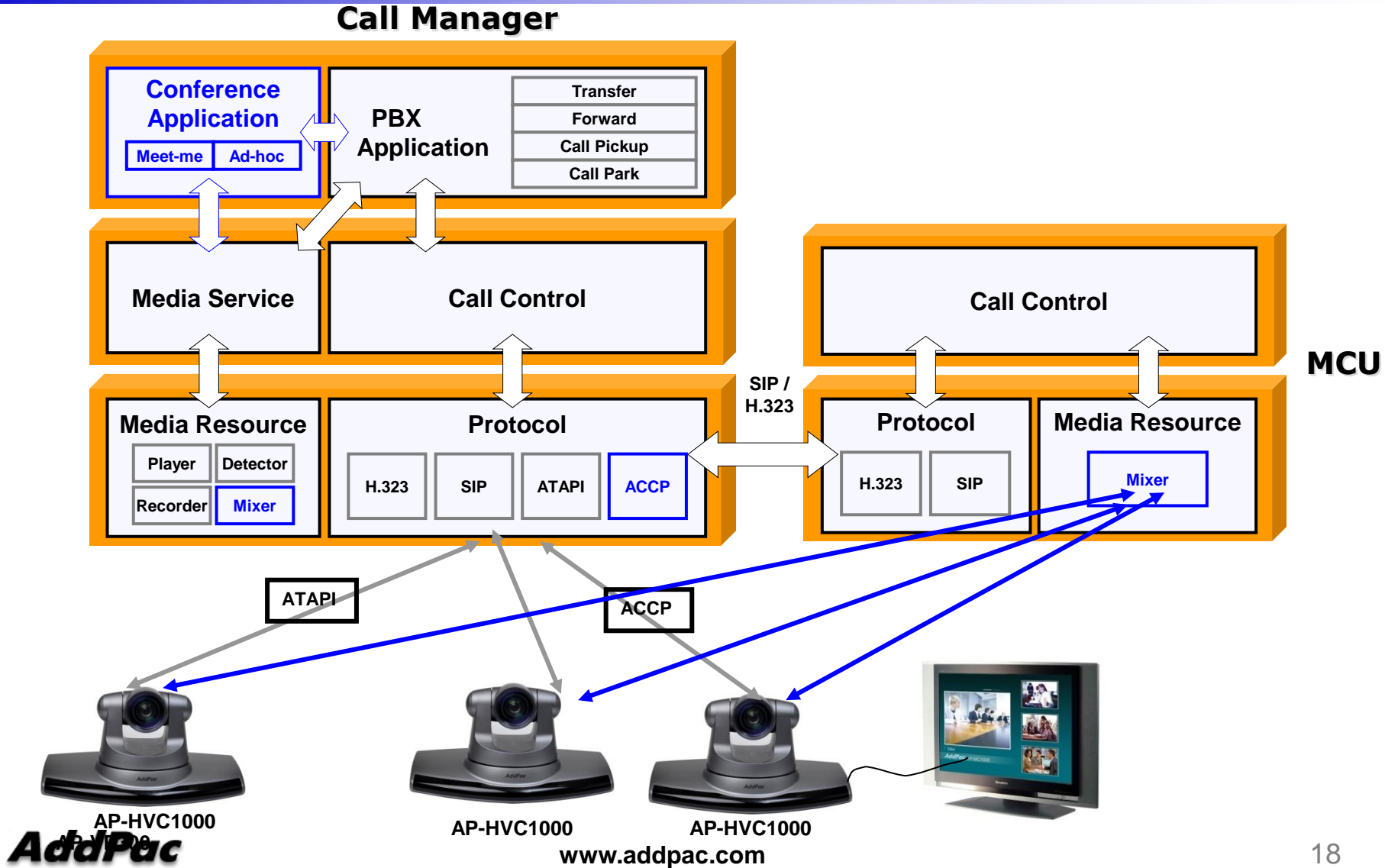
AP-HVC1000

AP-HVC1000

www.addpac.com

# MCU Service and Features (cont..)

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec



# MCU Service and Features (cont..)

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- Type of Conference
  - Meet-Me (Dial-In) Conference
    - Require that a *range of directory numbers* be allocated for exclusive use of the conference
  - Ad Hoc (On-Demand) Conference
    - using Conference and Join soft key
  - Dial-Out Conference
- View Mode Configuration

# Network Service and Features

## AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- **Basic Routing**
  - Static Routing (IPv4)
  - Static / DHCP / PPPoE
  - VRRP (Virtual Redundancy Routing Protocol)
- **Network Management**
  - SNMPv2/SNMPv3 Support
  - Standard & Enterprise SNMP MIB Support
  - Web Based Management using HTTP/HTTPS
  - Console / Telnet / Rlogin / SSH Interface
- **Security Function**
  - Standard & Extended IP Access List
  - HTTPS / SSH Interface
  - Auto-disconnect Telnet/Console Session
  - Access Control for Local Service (FTP/Telnet/HTTP.)
  - Enable/Disable Network Services
  - Multi-Level User Account Management

# Network Service and Features

## AP-HVC2000 Two(2)-Channel Full HD Video Conference Codec

- **Operation & Management**
  - Configuration Backup & Restore for APOS Managements
  - Use Multiple APOS™ and Configuration
  - Auto Upgrade via HTTP/HTTPS
  - Debugging, System Auditing, and Diagnostics Support
  - FTP/TFTP/Telnet/SSH Server and Client
  - HTTP Server
  - Remote logging using Syslog
  - Local System Logging (Local HDD model)
  - RADIUS Authentication / Account
- **Other Scalability Features**
  - Network time Protocol (NTP) Support
  - Cisco Style Command Line Interface (CLI)
  - DHCP Server & Relay Functions
  - **DNS Server**

# OSD Software Overview

# Contents

- Menu Control Mode
- Dial Mode
- Conversation View Mode
- Display Layout Call Mode
- Key Pad Mode for Dialing Number
- Phone Book OSD
- Phone Book : New Contact
- Recent Call OSD
- Tools OSD Mode
- Codec Configuration : IP address, etc
- Status Bars OSD
- PTZ Control OSD

# Menu Control Mode

Keypad, Phonebook, Recent Call, PTZ Control, Tools, Layout, Configuration



Menu Bar Indication  
ICON

Function Key List  
for Soft-key



# Dialing OSD



# Conversation View Mode



Remote Site View

PIP : Local Site View

# Conversation View Mode



Remote Site Full Screen View

# Display Layout Control Mode



# Keypad Menu for Dialing Number



# Phone Book OSD Menu



# Phone Book OSD Menu : New Contact



# Recent Call OSD Menu





# Tools OSD Menu



# Codec Configuration



# Status Indication Bars OSD

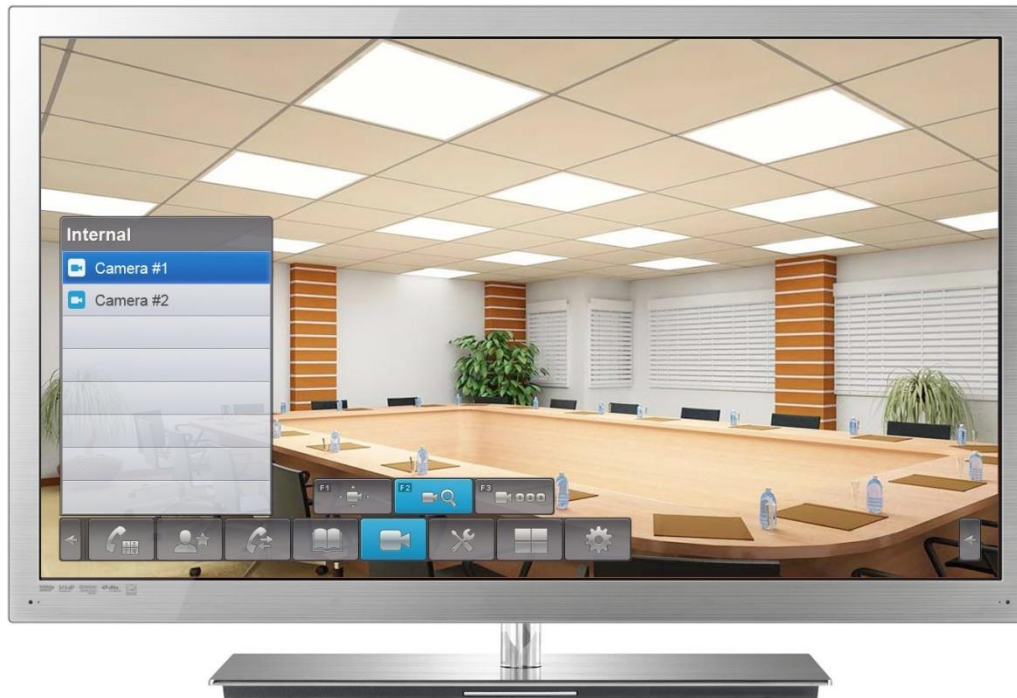
Status Bars



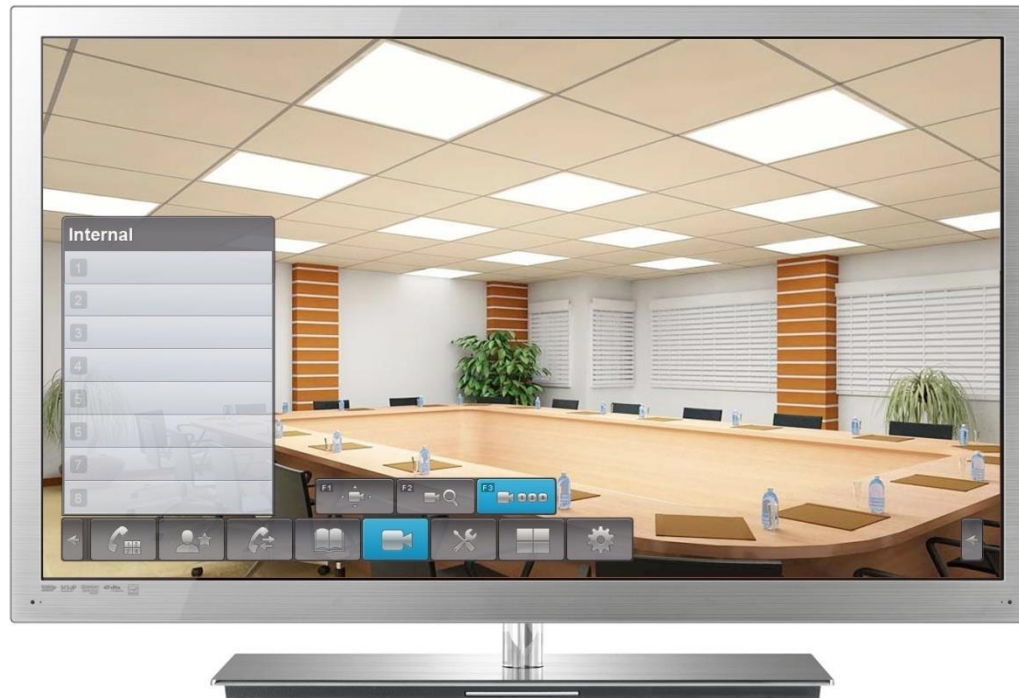
# PTZ Control : Camera #1



# PTZ Control : Camera Select



# PTZ Control : Preset Setting



# AP-HCC2000 Full HD Video Conference Codec

## Application Area

- Audio/Video Real-time Broadcasting
- Video Telephony
- Video Telephony + Document Broadcasting
- Video Telephony + Video Broadcasting
- Video Conference

# Video Telephony Application

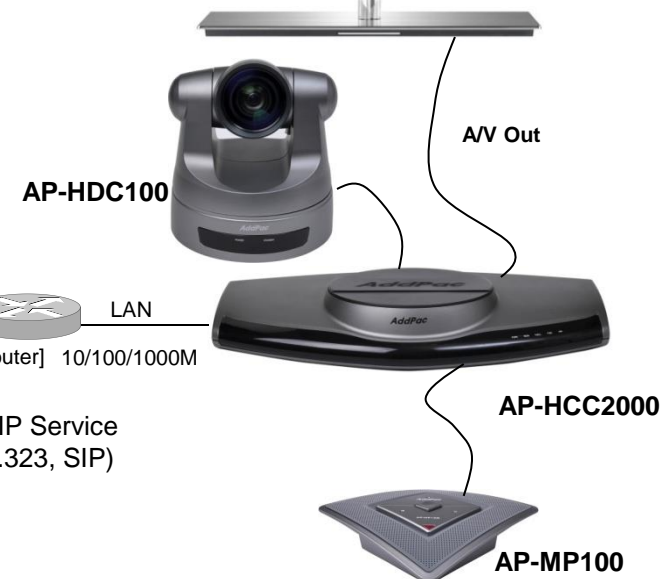
AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

H.264, 1080i, 30frame



Point-to-Point Video Service  
(symmetric video quality)

H.264, 1080i, 30frame



30fps, Full HD

30fps, Full HD

IP Network

**Multimedia Service**  
(Video, Audio/Voice, and more...)  
[www.addpac.com](http://www.addpac.com)



# Video Telephony + Document Broadcasting

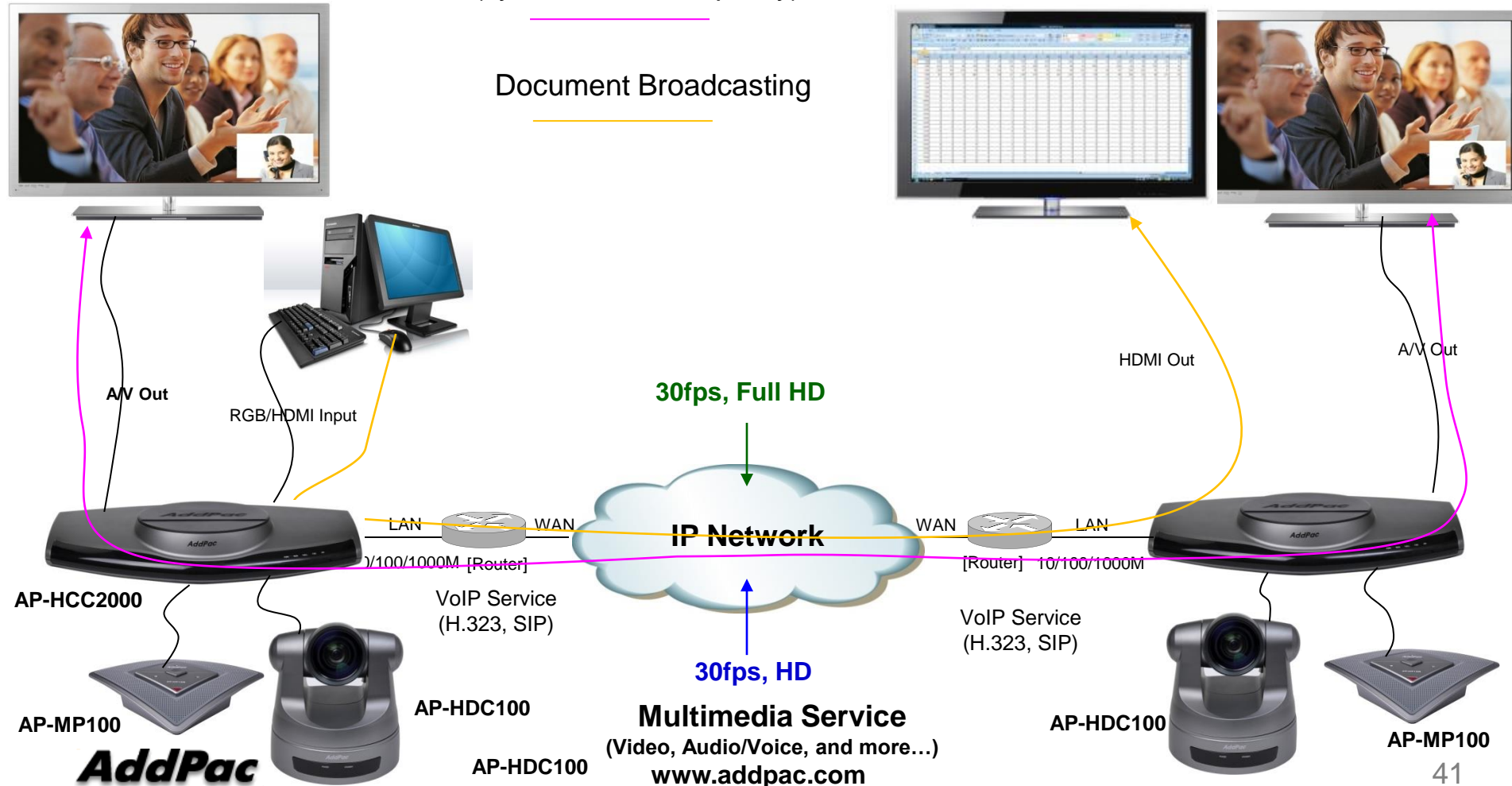
AP-HVC2000 Two(2)-Channel Full HD Video Conference Equipment

H.264, 1080i, 30frame

Point-to-Point Video Service  
(symmetric video quality)

H.264, 1080i, 30frame

Document Broadcasting



# Video Telephony + Video Broadcasting

AP-HCC2000 Two(2)-Channel Full HD Video Conference Equipment

Point-to-Point Video Service  
(symmetric video quality)

H.264, 1080i, 30frame



H.264, 1080i, 30frame



Video Broadcasting

Video Broadcasting Camera



A/V Out

HD-SDI Input

HDMI Out

A/V Out

30fps, Full HD

IP Network

30fps, Full HD

LAN [Router] WAN

WAN [Router] LAN

VoIP Service  
(H.323, SIP)

VoIP Service  
(H.323, SIP)

Multimedia Service  
(Video, Audio/Voice, and more...)  
[www.addpac.com](http://www.addpac.com)

AP-HCC2000

AP-MP100

AP-HDC100



AP-HDC100

AP-MP100

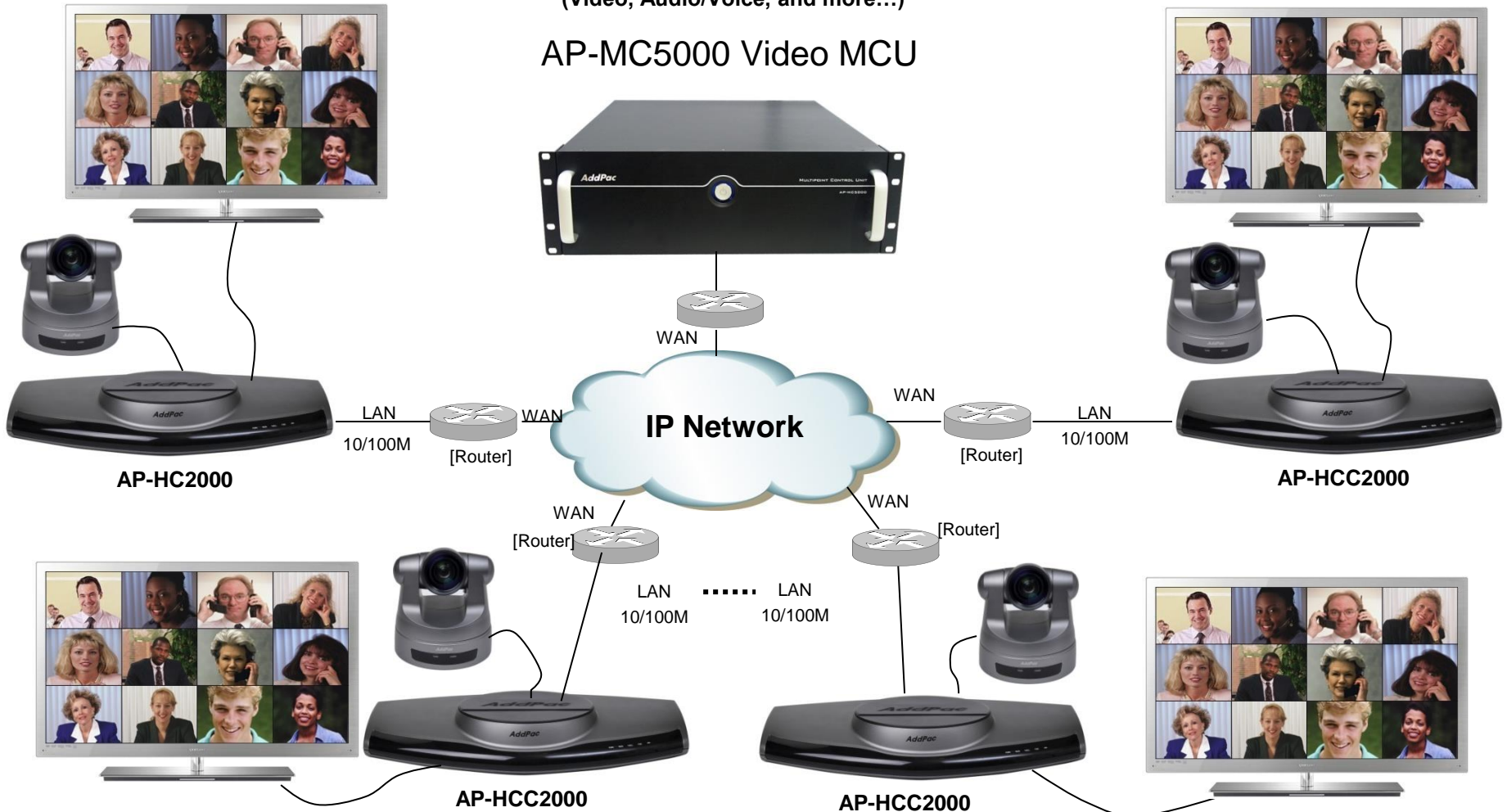
**AddPac**

# Video Conference

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

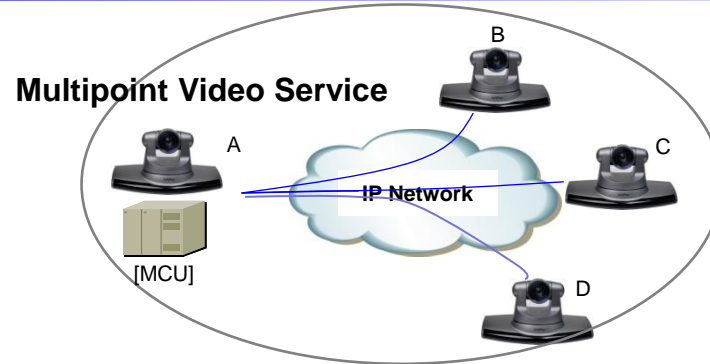
**Multipoint Video Service**  
(Video, Audio/Voice, and more...)

AP-MC5000 Video MCU

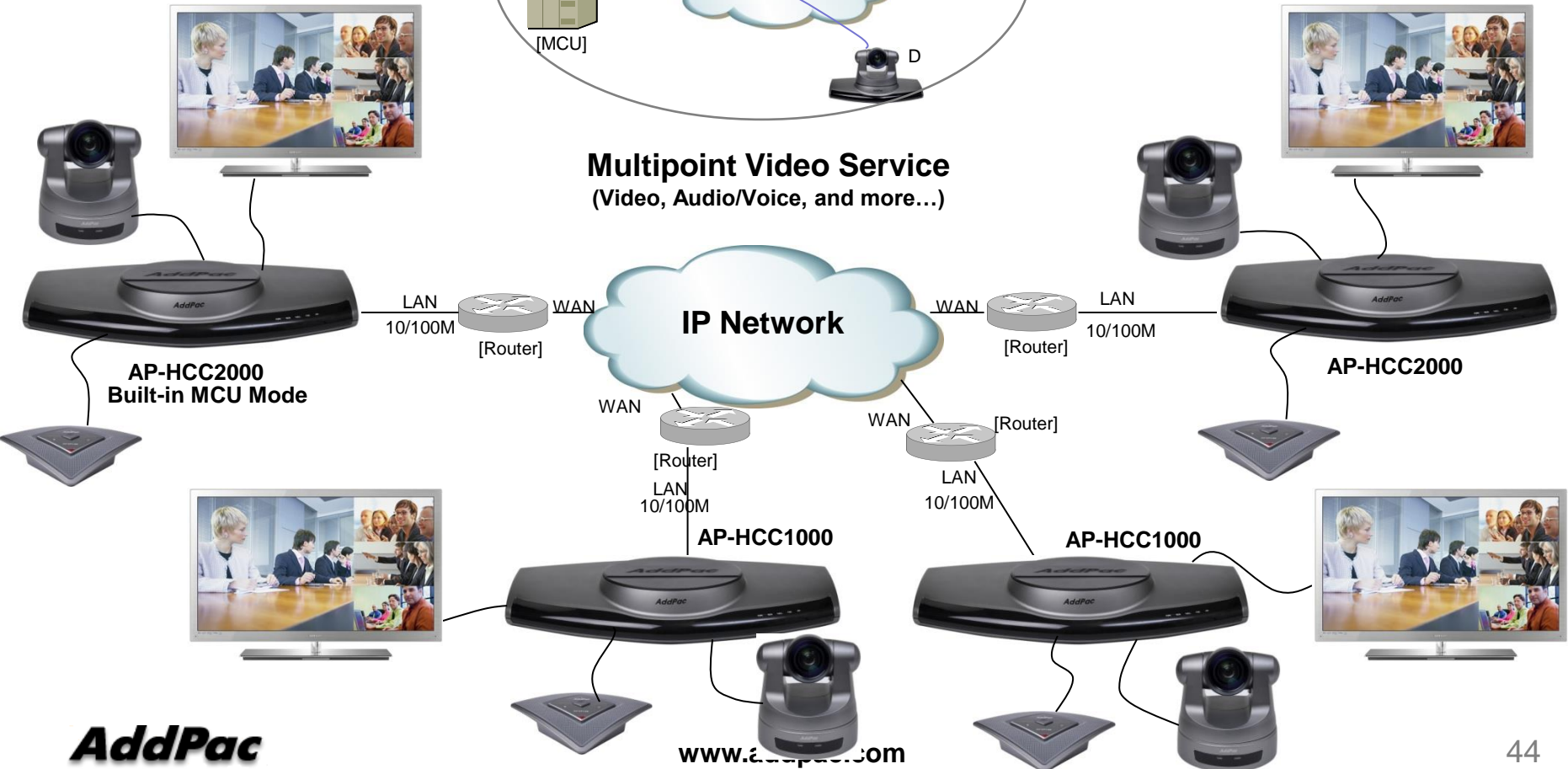


# Video Conference

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec



**Multipoint Video Service**  
(Video, Audio/Voice, and more...)



# Ordering Information

- AP-HCC2000 Full HD Video Conference Codec
  - AP-HCC2000 MCU Built-In Two(2)-Channel Full HD Video Conference Codec
  - Including Network Cable Set & Power Supply Cable, etc.
  - Option : Video Conference HD Camera, Microphone
- Built-in APOS Internetworking Software for AP-HCC2000
- Including 1 Year Hardware Warranty
- Product Documents
  - Install and Operation Guide (PDF)
- Pricing
  - AddPac Technology Regional Sales Manager
  - Authorized Sales and Marketing Representatives
  - Please Contact [www.addpac.com](http://www.addpac.com)

# Thank you!

**AddPac Technology Co., Ltd.**  
Sales and Marketing

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