Video Conference Phone Legacy IP-PBX Interworking Scheme

AddPac Technology
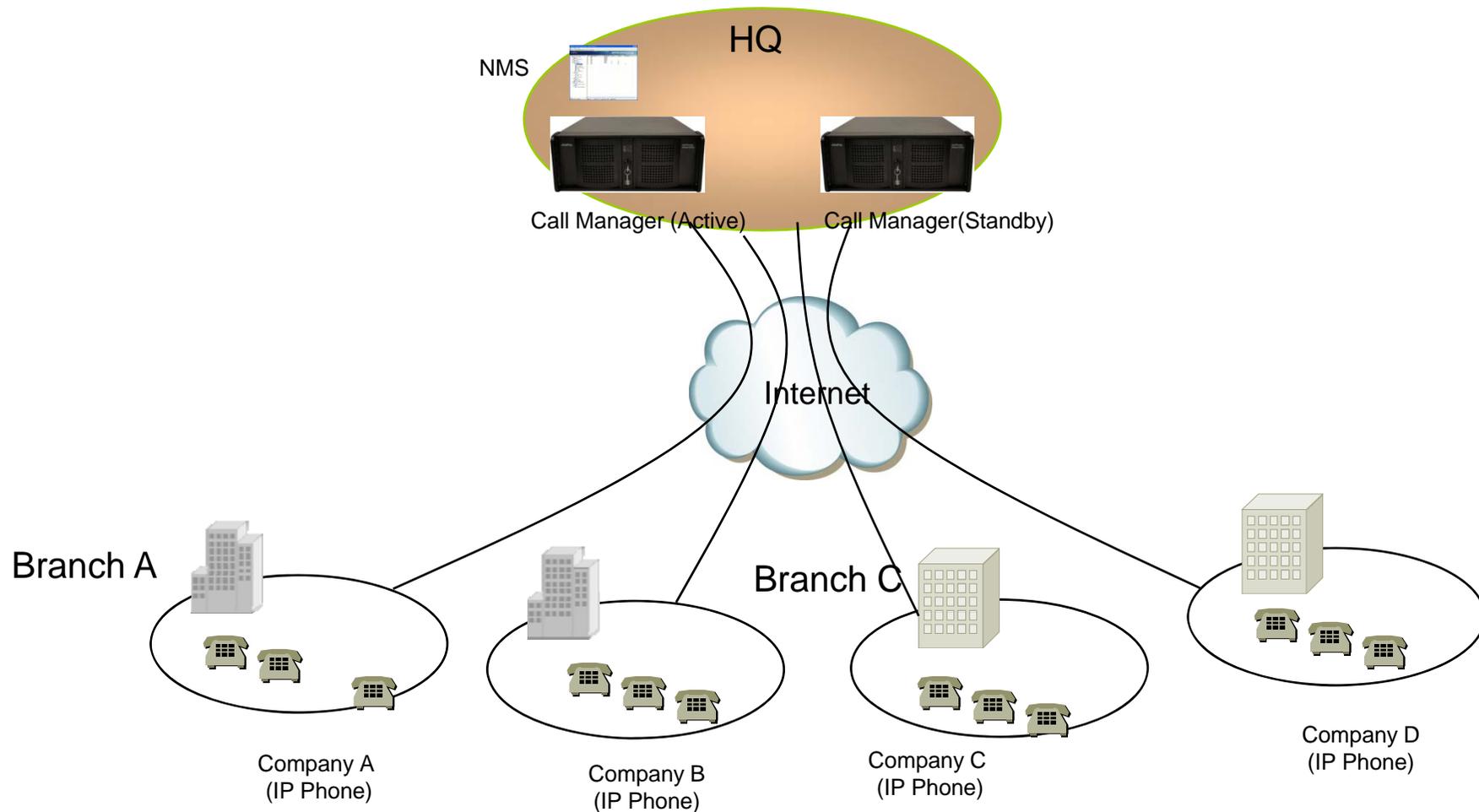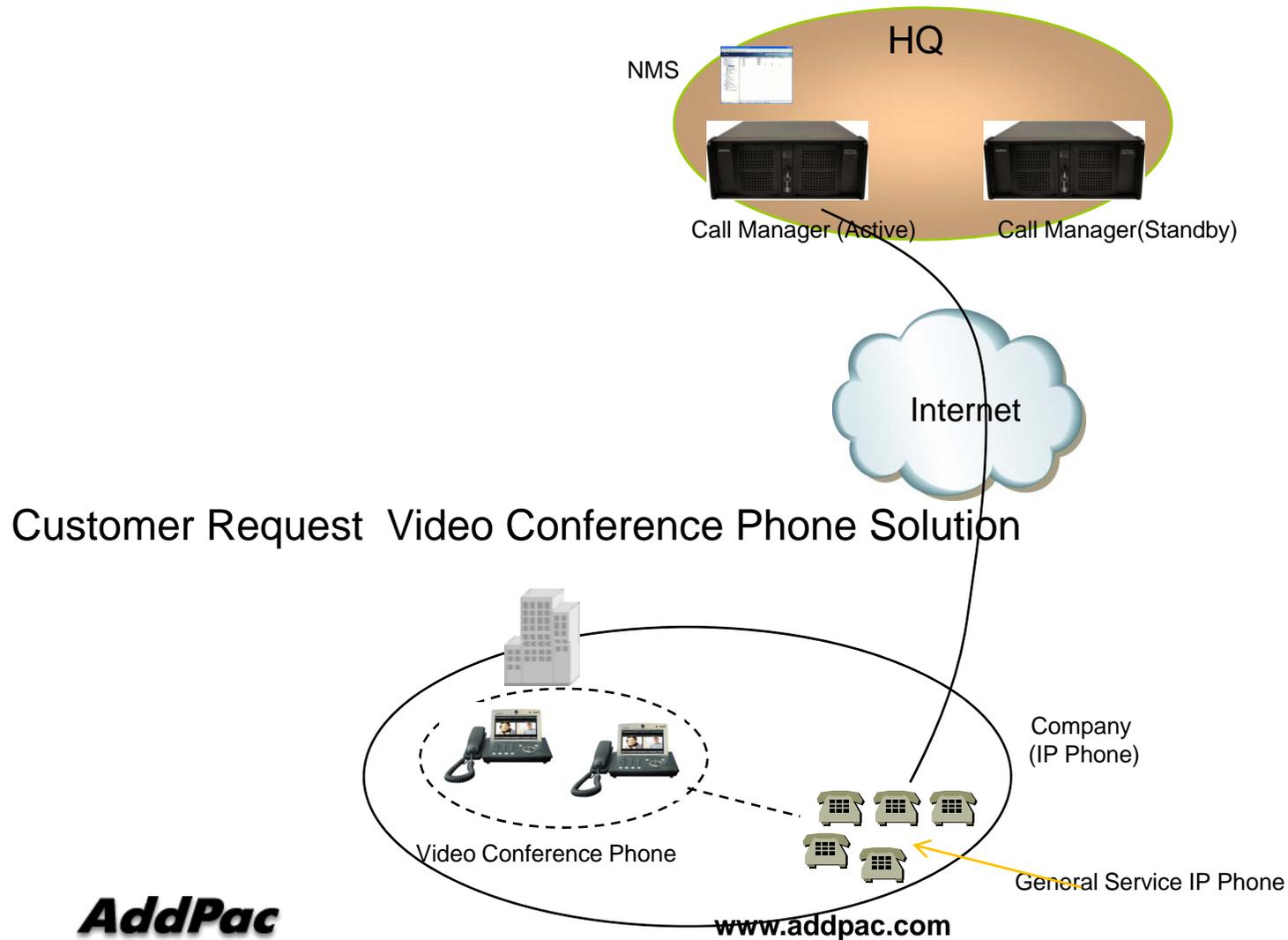
Sales and Marketing

Contents

- Network Diagrams

- Product Specifications
  - IPNext180 SIP Proxy Server for Video Conference
  - AP-VP280DM IP Video Phone for Video Conference
  - AP-MC5500 IP Video MCU : Option
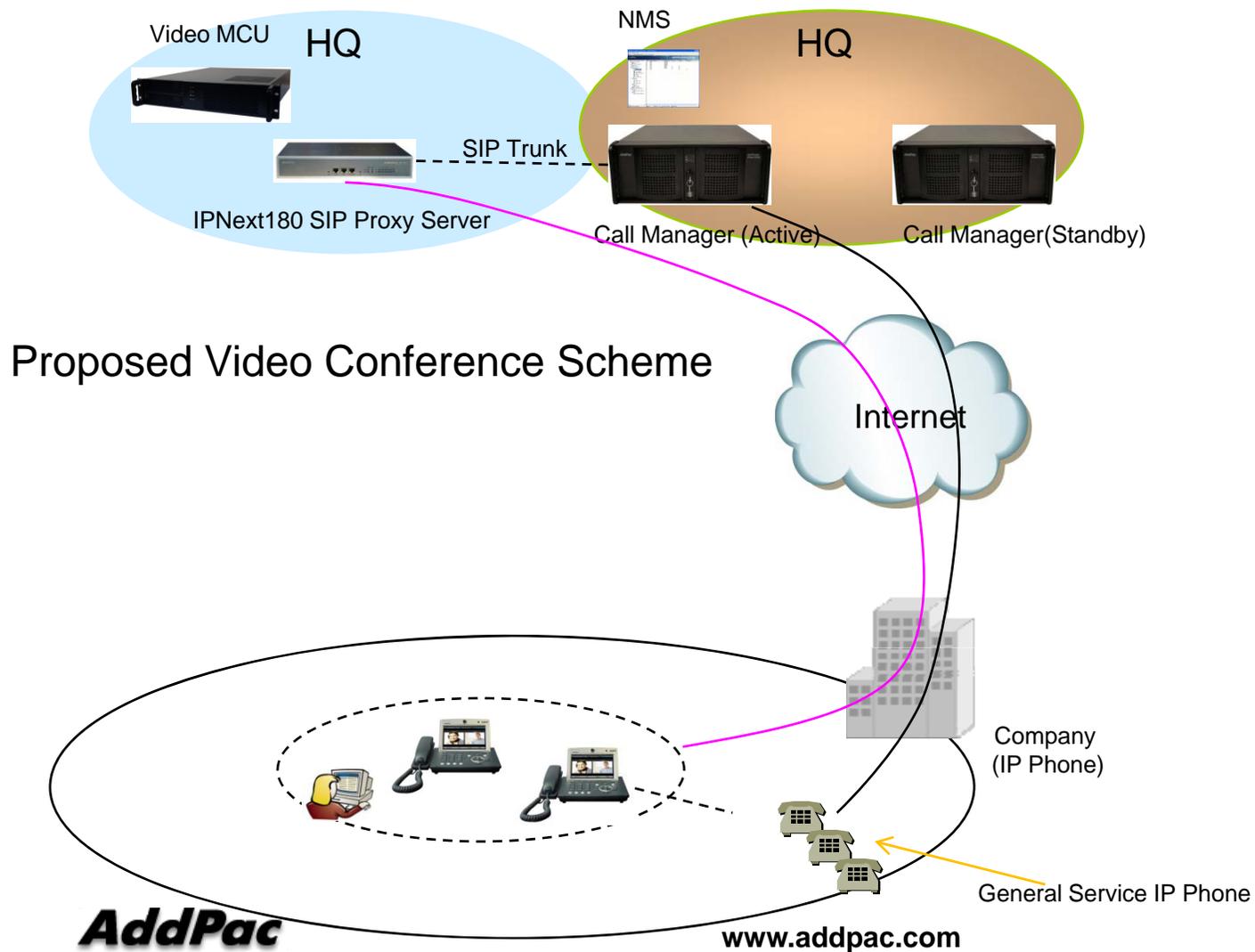
Network Diagram (Legacy IP-PBX)

HQ

NMS

Call Manager (Active)   Call Manager(Standby)

Internet

Branch A

Branch C

Company A
(IP Phone)

Company B
(IP Phone)

Company C
(IP Phone)

Company D
(IP Phone)

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Network Diagram (Legacy IP-PBX)

HQ

NMS

Call Manager (Active)   Call Manager(Standby)

Internet

Customer Request Video Conference Phone Solution

Company
(IP Phone)

Video Conference Phone

General Service IP Phone

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Network Diagram (Legacy IP-PBX)

Video MCU

HQ

NMS

HQ

SIP Trunk

IPNext180 SIP Proxy Server

Call Manager (Active)

Call Manager(Standby)

Proposed Video Conference Scheme

Internet

Company
(IP Phone)

General Service IP Phone

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Product Solution Overview

IPNext180 SIP Proxy Server for Video Conference Service

Product Overview

- IP based Advanced Hybrid IP-PBX Solution
- IPv4/IPv6 Multimedia Telephony Solution for Small Office
- PSTN Interface (FXO, FXS) Support
- Powerful Management and User Friendly Features
- Fault Tolerant and Scalability Architecture
- High-performance Video, Audio, and Voice Service
- Firmware Upgradeable Architecture
- IVR Service with Scenario Editor
- Voice Mailing Service
- Presence Service for High-End IP Key Phone, UC
- RTP Proxy Service for Private IP service
- SIP, H.323 Signaling for Outbound Calls
- Various Call Scenario (Call Pickup, Call Park, Call Transfer, etc)
- Various IP Terminal Support

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Hardware Specification

64bit
CPU

- **RISC Microprocessor Computing Power**
- **Main Chassis**
  - **Fixed Network Interface**
    - Two(2) 10/100Mbps Fast Ethernet
    - One(1) RS-232C Console (RJ45)
  - **Two(2) VoIP Module Slots for FXS, FXO etc**

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Hardware Specification

64bit CPU

DSP

Front Side

LAN1 (10/100Mbps)

LAN0(10/100Mbps)

Console Port

Hardware Specification

64bit
CPU

DSP

Back Side

PSTN Interface Module

Power Inlet

Power Switch

Hot-Swap Switch & LAMP Indication

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Hardware Specification

64bit CPU

Audio Codec

- **VoIP Interface Module**

AP-N1-FXS8		8-Port FXS Voice Processing Module (8 x RJ11)
AP-N1-FXO8		8-Port FXO Voice Processing Module (8 x RJ11)
AP-N1-FXO4S4		4-Port FXO and 4-Port FXS Voice Processing Module (8 x RJ11)
AP-N1-E1T1		1-Port VoIP Digital E1/T1 Interface Module(1xRJ45)

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IP Telephony Service and Features

- **Signaling Server**
  - SIP Application Server, Proxy, Registrar and Location Server (RFC3261)
  - Multiple ITSP Trunk with SIP & H.323 Accounts Support
    - **IP UA Client Role for Registering to ITSP SIP Server**
    - **H.323 Gatekeeper Client Role for Registering to ITSP H.323 Gatekeeper Server**

- **IVR & Auto Attendant**
  - Default Auto Attendant Support
  - Interactive Voice Response (IVR)
    - **Provides with GUI-based Smart IVR Scenario Editor**
    - **Upload/Download Scenario by Smart IVR Scenario Editor**
    - **Supports Multiple Concurrent Scenarios**
    - **Supports Recordable IVR Prompts**

- **Voice Mail**
  - Support Voice Mail with IVR
  - Access from Remote Site via Trunk Support
  - Voice Mail Notification Support

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IP Telephony Service and Features

- **Number & Call Routing**
  - Trunk Hunting by Preference or Sequential
  - Call Hunting by Preference, Simultaneous, Random
  - Call Hunting by Chained Hunting Group
  - Partition for Address Grading
  - Call Class for Call Access Control
  - Number Translation Rule for Inbound/Outbound Call
  - Centrex with Prefix Support
  - Multiple Shared Devices with One Number
  - Multiple Numbers on One Device
  - Individual Call Park within Park Number Pool
  - Group Call Park within a Group or Other Group
  - Call Pickup of Ringing Call of Same Group or Other Group
  - Call Pickup of Parked Call
  - Call Transfer - Blind, Consult
  - Call Forwarding - Unconditional, Busy, No Answer, Voice Mail
  - Call Waiting
  - Call Swaping
  - Call Hold

IP Telephony Service and Features

- **IP-PBX Advanced Features with AddPac IP Phones**
    - Multiple Call Handling with Call Status and Calling Line Number and Name
    - Plug and Play with Auto Discovery Function
    - Softkey Map Download and Control
    - Time and Date Setting
    - Voice Mail List View
    - Parked Call List View
    - Call Forward Setting
    - Recent Call List View
    - Calling Number and Name Identification
    - Individual Call Park within Park Number Pool by Softkey
    - Group Call Park within a Group or Other Group by Softkey
    - Call Pickup of Ringing Call of Same Group or Other Group by Softkey
    - Call Pickup of Parked Call by Softkey
    - Call Transfer - Blind, Consult by Softkey
    - Call Waiting Indication
    - Call Swaping by Softkey
    - Call Hold by SoftKey
    - Conference Control

IP Telephony Service and Features

- **User & Device Management**
  - LDAP (Light weight Directory Access Protocol) Support
    - Supports Hierarchical Organization
  - Auto Discovery of IP Phones & Video Phones
  - Monitoring Status of Phones

- **Miscellaneous***
  - Distinctive Ring by Calling User
  - Auto Config & Upgrade
  - Personal Directory
  - Downloadable Ring
  - Do not Disturb

IP Telephony Service and Features

- **Conference**
  - G.711 (4-party Conference, 2 session) : Basic
  - G.711/G.729/G.723 (4-party Conference, 2session) Internal MCU Module : Option
  - Ad-hoc Conference
  - Dial-Out Conference
  - Meet-me Conference
  - Multiple External MCU support(Video, Audio, etc) : AddPac AP-MC1000, etc
  - Conference Chair and Participants Management

- **Music & Announcement**
  - Music on Hold
  - Replaceable Announcements
  - Dialing Music / Tone Service

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AP-VP280DM
IP Video Phone

High Quality, High Resolution

AP-VP280DM IP Video Phone

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High Quality, High Resolution

AP-VP280DM IP Video Phone

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Product Overview

- IP based Video Phone Solution
- High-Quality Video, Audio, and Voice Service
- High Performance Programmable Video DSP
- Video Telephony and Videoconferencing Service Features
- H.323 and SIP Dual VoIP Signaling Protocols
- H.264/H.263 Video Codec Support
- Various Call Scenario Support
- Call Status Monitoring Support
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection

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Benefits and Features

- **7 Inch LCD Display, Touch Screen**
- **External Video Interface**
  - Composite (RCA) Video In/Out, S-Video Out
  - Audio (RCA) In/Out
- **High-performance Video Codec Support**
  - H.263, MPEG-4, and H.264
- **High-performance Audio Codec Support**
  - G.722(16KHz), G.711, G.729, G.723.1 ,etc
- **Powerful Image Resolution Support**
  - QCIF(176x144), CIF(352x288), QVGA(320x240), and VGA(640x480)
- **Up to 30fps at 1Mbps with VGA-Resolution(H.264)**
- **Video Conference Call Support (AddPac MCU Inter-working)**
- **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**

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Hardware Specification

High-end
DSP

- **High-end Programmable DSP Hardware Architecture**
- **Video Input Interface**
  - RCA Video Input
- **Video Output Interface**
  - RCA Video Output, HDMI Video Output
- **High quality Audio and Voice Interface**
  - Stereo Audio Input & Output Connector
- **Network Interface**
  - One(1) 10/100Mbps Fast Ethernet
  - One(1) RS-232C Console
  - One(1) USB Interface
- **PSTN Interface**
  - One(1) FXO(RJ11) interface (Option)
- **Power Supply**
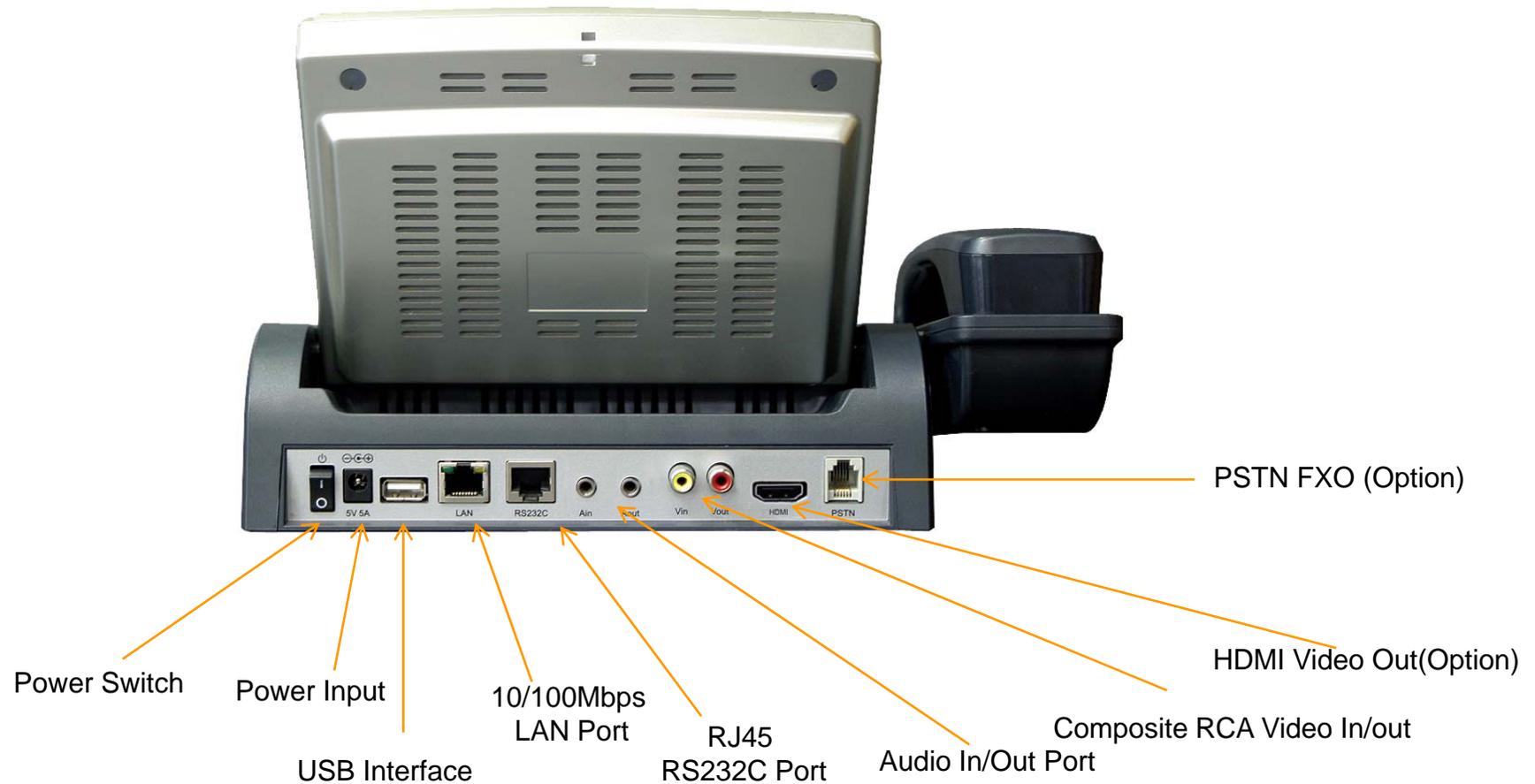 - External Power Adaptor
  - PoE (Power over Ethernet) : Option

Touch Screen

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Hardware Specification

Video Camera

Call Indication LAMP

7inch LCD with Touch Screen

Dial & Function & Menu Keys

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Hardware Specification

PSTN FXO (Option)

HDMI Video Out(Option)

Power Switch

Power Input

10/100Mbps
LAN Port

RJ45
RS232C Port

Composite RCA Video In/out

USB Interface

Audio In/Out Port

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Video Service and Features

- **Various Video Networking Interface**
  - Composite (RCA), HDMI Output
- **High-performance Video Codec Support**
  - H.263, MPEG-4, and H.264
- **Powerful Image Resolution Support**
  - QCIF(176x144), CIF(352x288), QVGA(320x240), and VGA(640x480)
- **Up to 30fps at 1Mbps with VGA-Resolution(H.264)**
- **256Kbps to 1Mbps Operating Video Traffic Bandwidth**
- **Rate Control for Video Traffic QoS**
  - Ensuring Optimized Quality
  - Frame Rate with Limited Bandwidth
- **High-end Error Resilient Against Various Packet Error**

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AP-MC5500
IP Video MCU

Product Overview

- IP based Multipoint Audio/Video Mixing Solution
- Support Various Conference System Model (**Dial-out, Add-Hoc, Meet-me)**
- Scalability and Flexibility
- Large-Scale 64 Party IP Video MCU
- Multi-User/Multi-Session Video Conference Support
- Call Manager Function Included (Option : External Call Manager Support)
- Support Various Video Codec (H.264, H.263, MPEG4, etc)
- High-performance Video, Audio, and Voice Service
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection

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Video Service and Features

- High-performance Video Codec Support
  - H.263, MPEG-4,H.264

- Powerful Image Resolution Support
  - QCIF(176x144), CIF(352x288), QVGA(320x240), and VGA(640x480), HD(1280x720), Full HD (1920x1080), etc

- Up to 30fps at with Full HD-Resolution(H.264)

- 256Kbps to 10Mbps Operating Video Traffic Bandwidth

- Rate Control for Video Traffic QoS

  - Ensuring Optimized Quality

  - Frame Rate with Limited Bandwidth

- High-end Error Resilient Against Various Packet Error

Audio & Voice Service and Features

- VoIP based Signaling Protocol Support
  - SIP, H.323* based Signaling Protocol Stack
- High-performance Audio & Voice Codec Support
  - G.726, G.711, G.722, G.722,1, etc, Audio Codec
- Enhanced QoS Management Features for Voice Traffics

Conference Service and Features (cont..)

- 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
  - Scheduled Conference
    - Through compatible third-party scheduling applications

- View Mode Configuration

Conference System Model

- Call Manager controlled conference

(1)

Call Manager + MCU

(Call Control,
Conference Control,
IVR, Mixing)

MCU Integrated

(2)

Call Manager

(Call Control,
Conference Control,
IVR)

**Signalling or
IPC**

MCU

(Mixing)
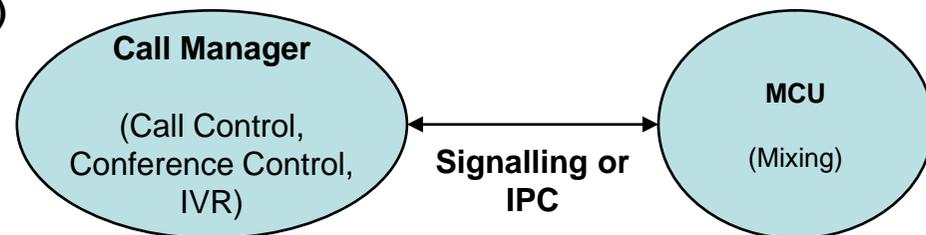
Using MCU as a Resource

- Interoperate with Stand-alone MCU

(3)

Call Manager

(Call Control)

Signalling
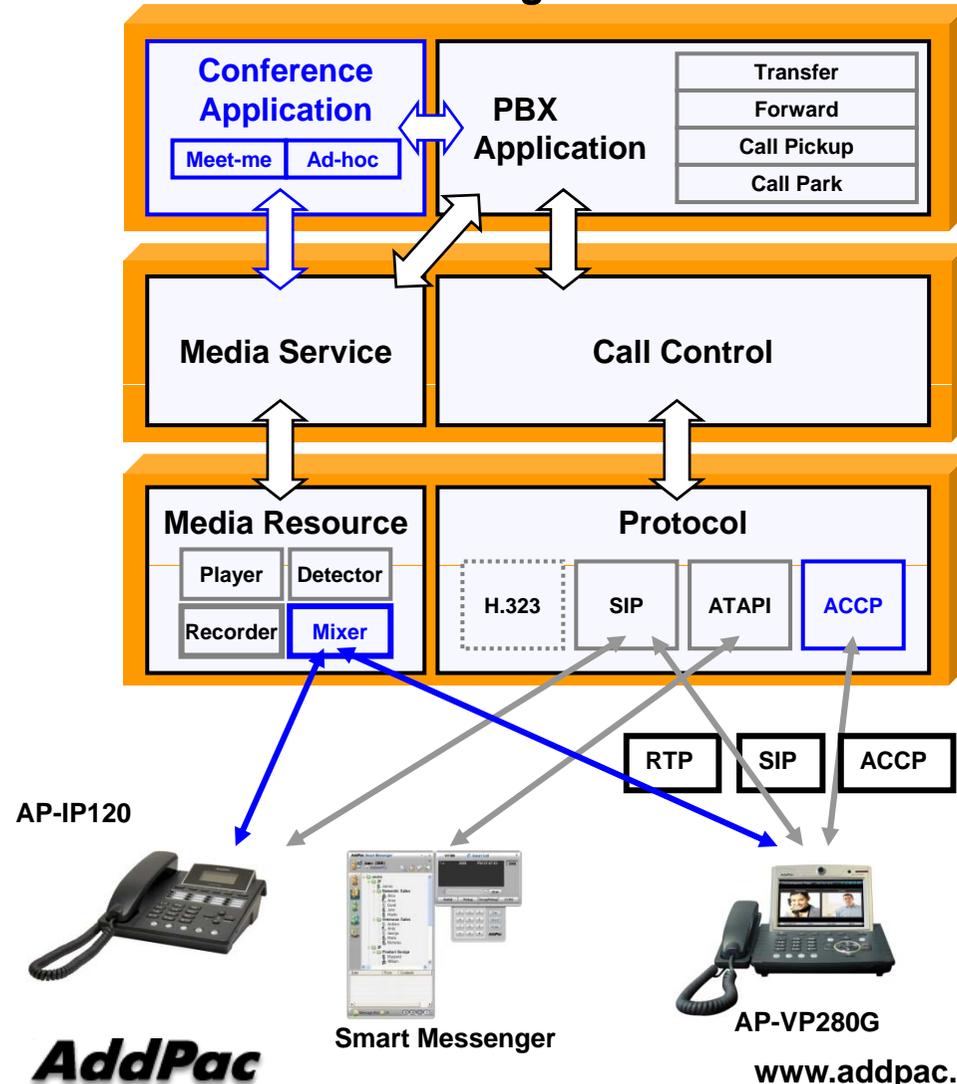
MCU

(Conference Control,
Mixing, IVR)
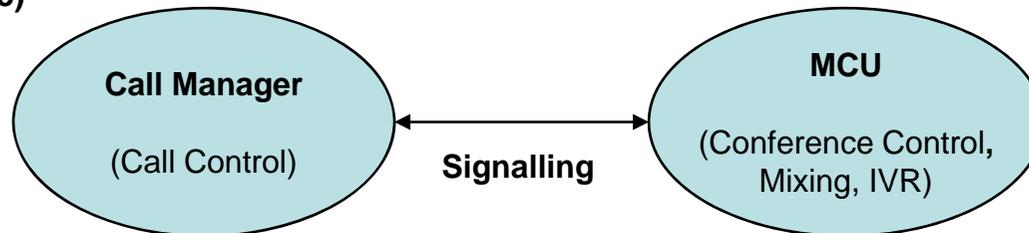
Conference Service and Features (cont..)

AP-MC5500 Video MCU

Call Manager + MCU

MCU Integrated Model

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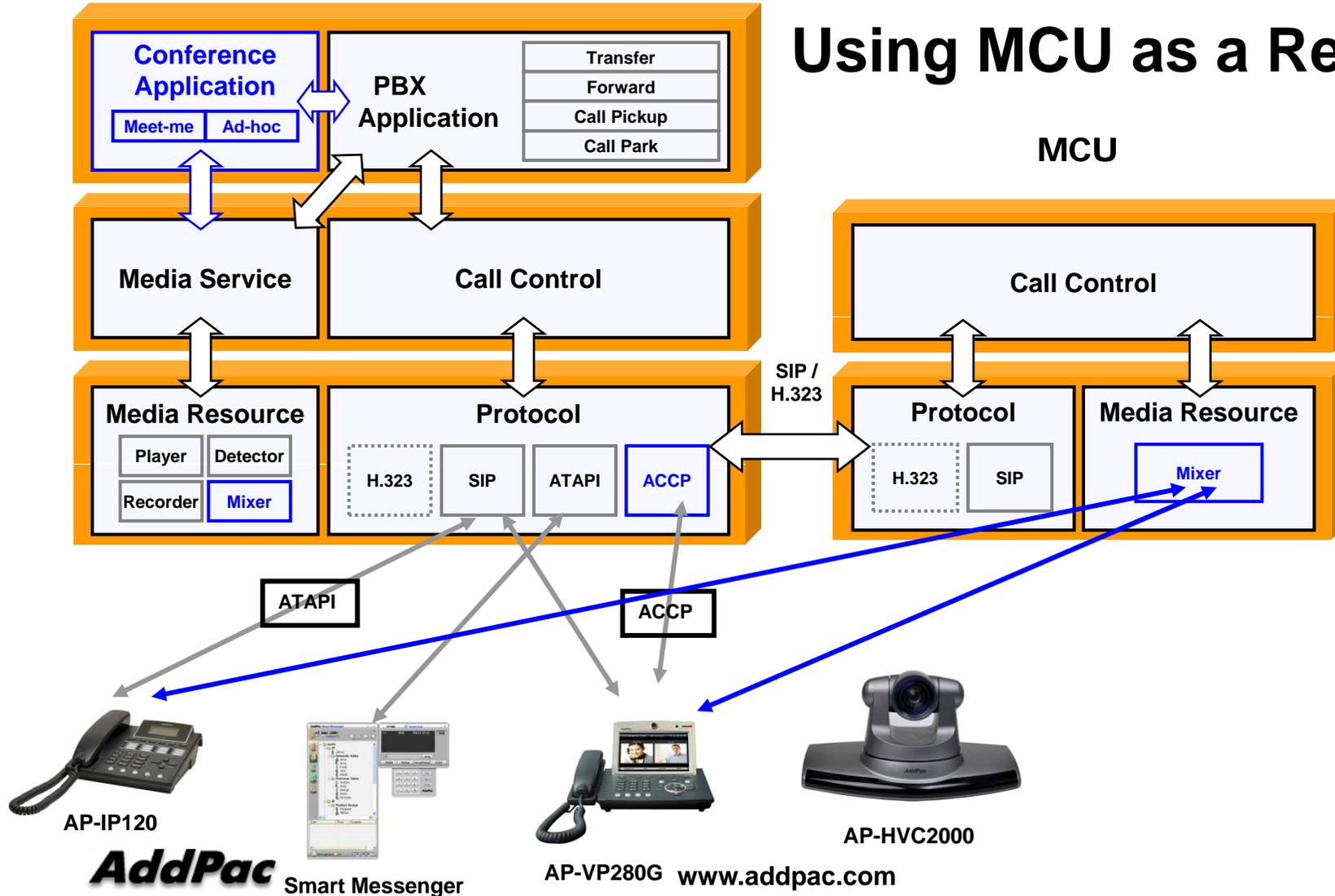* ACCP - AddPac Client Control Protocol

AP-IP120

Smart Messenger

AP-VP280G

AP-HVC2000

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AP-MC5500 Video MCU

Call Manager

Using MCU as a Resource

Conference Application
Meet-me | Ad-hoc

PBX Application

Transfer
Forward
Call Pickup
Call Park

MCU

Media Service

Call Control

Call Control

SIP / H.323

Media Resource

Player | Detector
Recorder | Mixer

Protocol

H.323 | SIP | ATAPI | ACCP

Protocol

H.323 | SIP

Media Resource

Mixer

ATAPI

ACCP

AP-IP120

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Smart Messenger

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AP-HVC2000

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Conference Service and Features

AP-MC5500 Video MCU

Stand-alone MCU Model

Call Manager

MCU

AP-IP120

Smart Messenger

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AP-VP280G

AP-HVC2000

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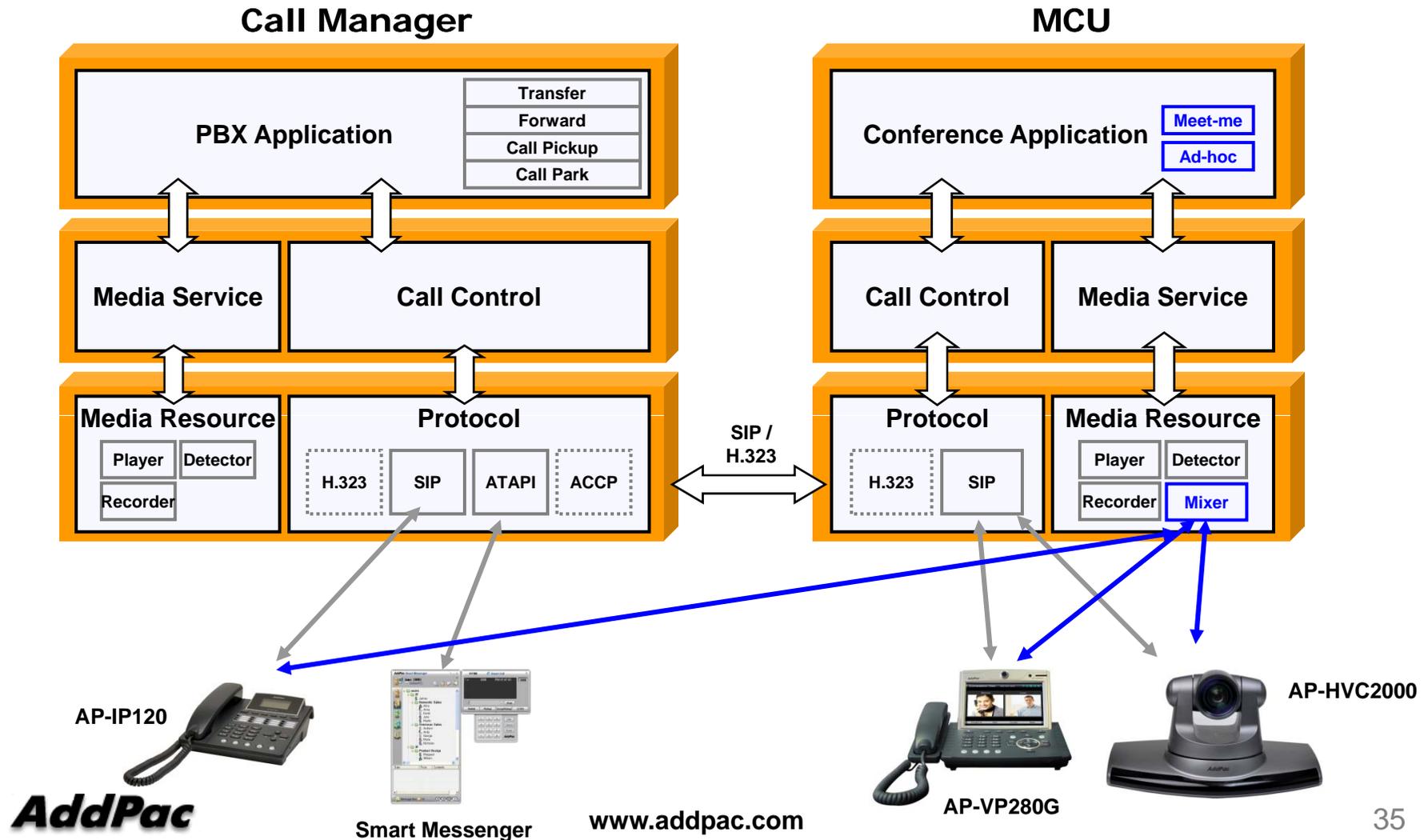
AP-MC5500 IP Video MCU

Network Diagram for Video Conference

AP-MC5500
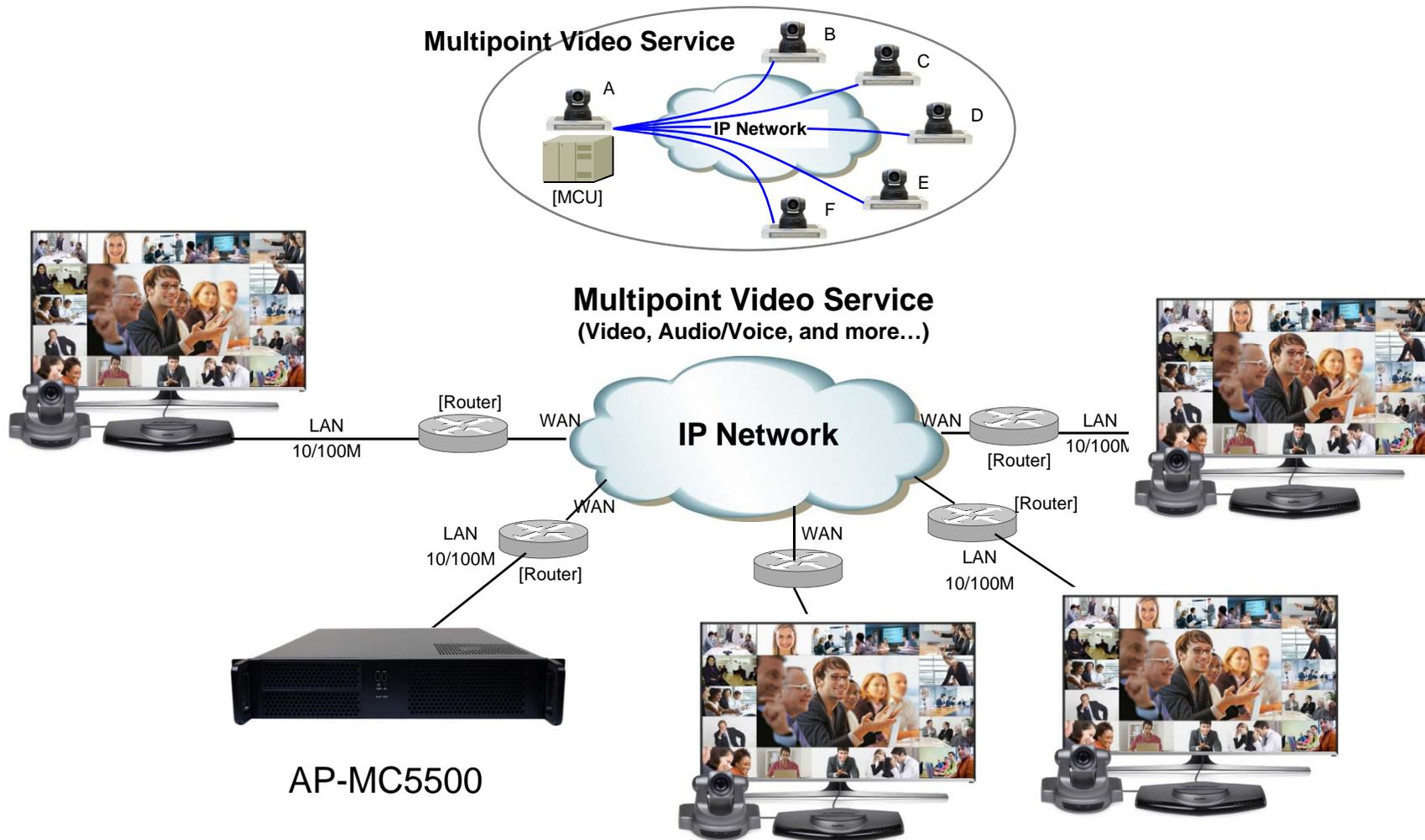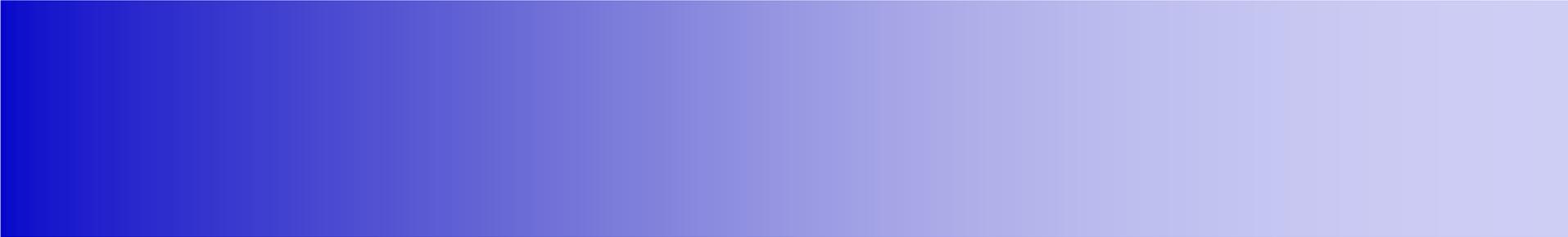
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Thank you!

AddPac Technology Co., Ltd.
Sales and Marketing

Phone +82.2.568.3848 (KOREA)
FAX +82.2.568.3847 (KOREA)
E-mail sales@addpac.com

AddPac