

# IPNext280™

## PTT Hybrid IP-PBX System (IP-PBX + PTT Server + VoIP Gateway)

Preliminary Product Overview



**AddPac**

**AddPac Technology**

2011, Sales and Marketing

[www.addpac.com](http://www.addpac.com)

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# Product Overview

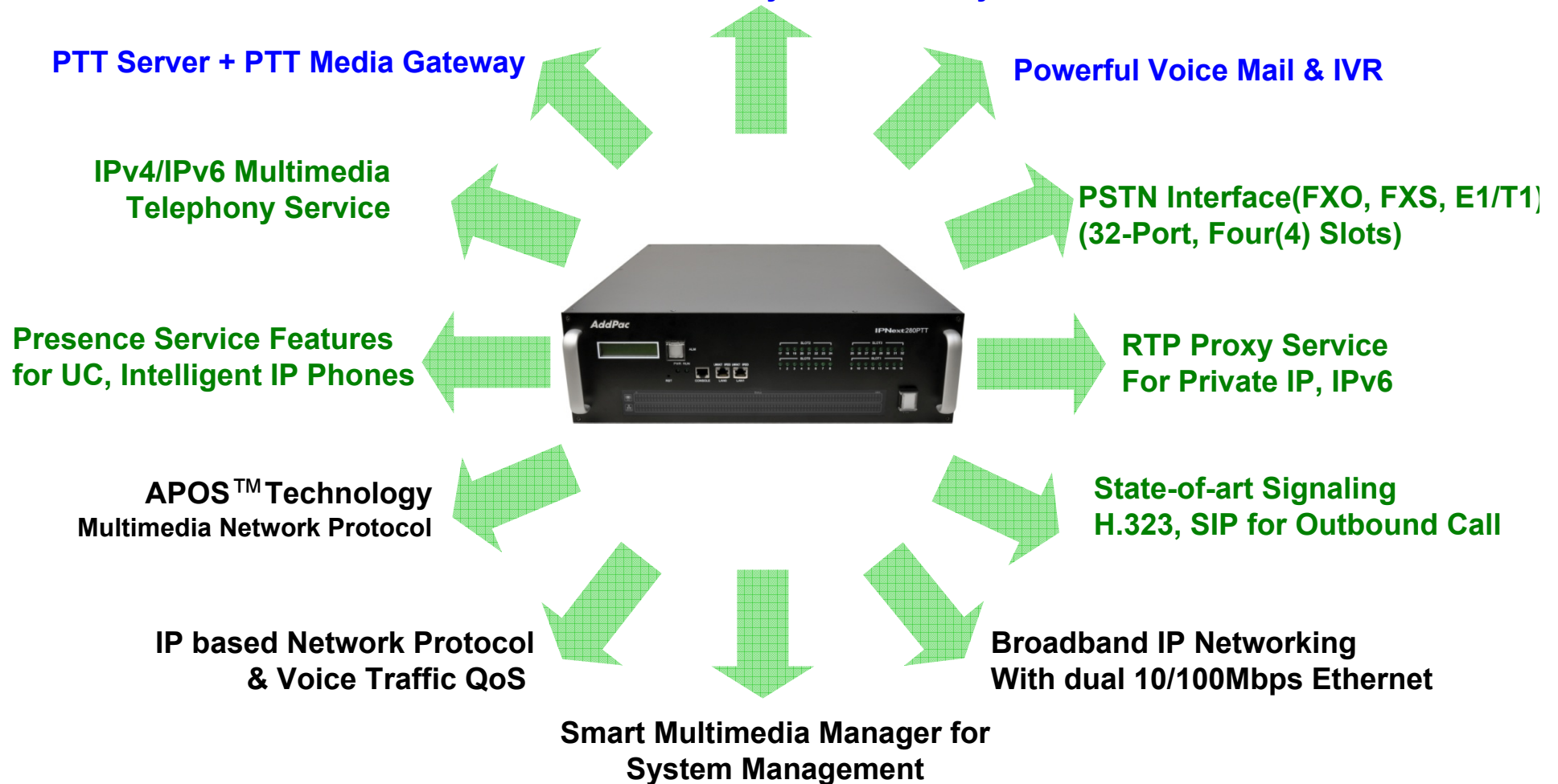
## IPNext280 PTT Next Generation Hybrid IP-PBX System

- IP based Advanced Hybrid IP-PBX Solution
- High Performance PTT Server Solution
- PTT Media Gateway Service for PSTN terminal
- IPv4/IPv6 Multimedia Telephony Solution for Small Office
- PSTN Interface (FXO, FXS, E1/T1) 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

# Product Highlights

IPNext280 PTT Next Generation Hybrid IP-PBX System

## IP based Advanced Hybrid IP-PBX System



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# Hardware Specification

IPNext280 PTT Next Generation Hybrid IP-PBX System

64bit  
CPU

- RISC Microprocessor Computing Power
- Main Chassis
  - Network Interface
    - Two(2) 10/100Mbps Fast Ethernet
    - One(1) RS-232C Console (RJ45)
  - Four(4) VoIP Module Slots for FXS, FXO, E1 etc
  - PTT Service Indication LAMP
  - CPU & Network Utilization Indication LED Display Array
  - Status Indication LCD & Clear Button LAMP
  - Media Gateway Port Indication LEDs
  - Dual Redundancy Power Supply (Module Type)

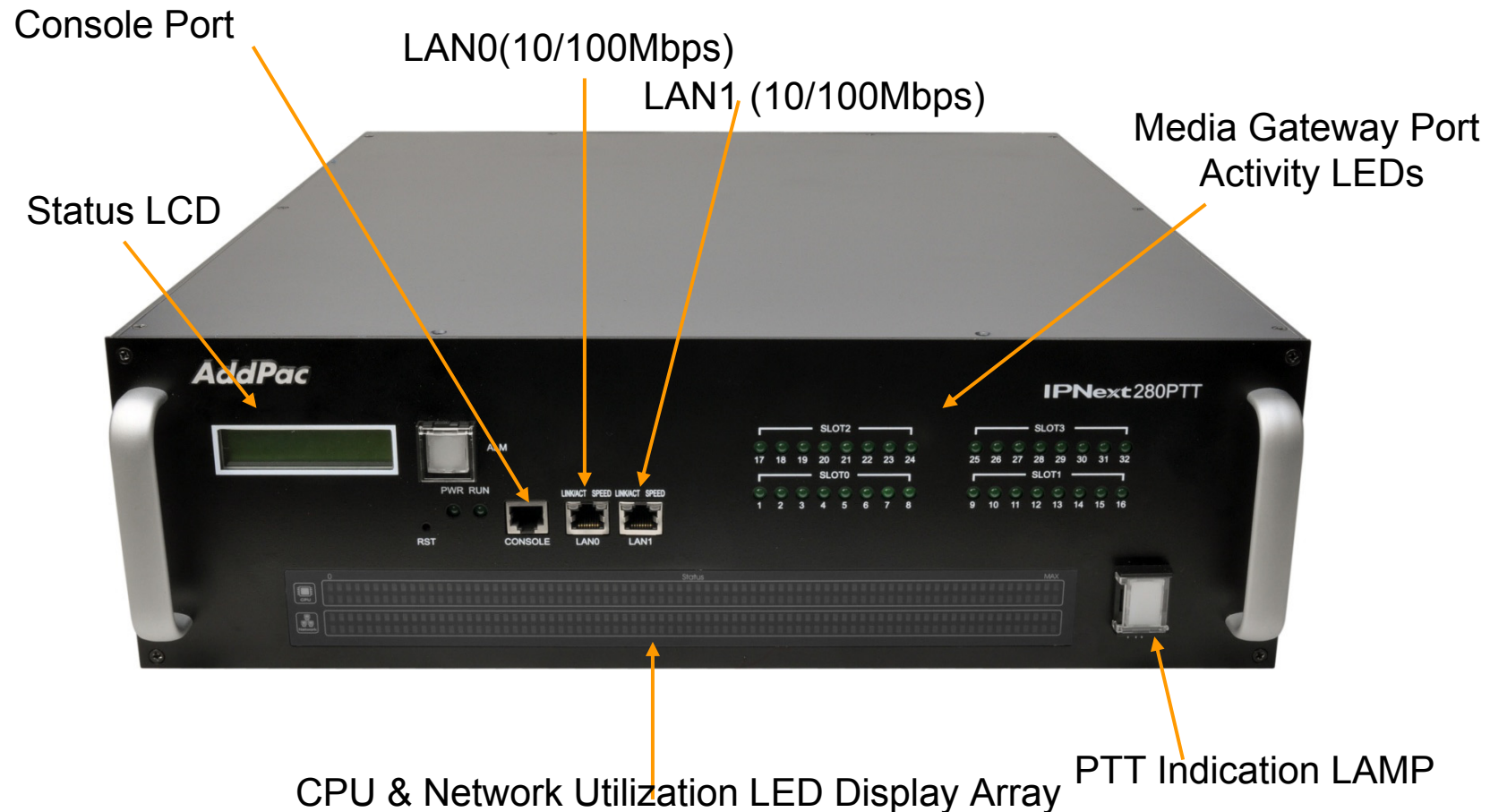
# Hardware Specification

IPNext280 PTT Next Generation Hybrid IP-PBX System

64bit  
CPU

DSP

## IPNext280 Front Side



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# Hardware Specification

IPNext280 PTT Next Generation Hybrid IP-PBX System

64bit  
CPU

DSP







## IPNext280 Back Side



# Hardware Specification

IPNext280 PTT Next Generation Hybrid IP-PBX System

DSP

VoIP Modules	Module Features	Module Picture
AP-FXS8	8-Port FXS Module	
AP-FXO8	8-Port FXS Module	
AP-FXS4O4	4-Port FXS&4-Port FXO Module	
AP-E&M8	8-Port E&M Module	
AP-E1	1-Port Digital E1/T1 Module	
AP-2E1	2-Port Digital E1/T1 Module	



# Software Service

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **Built-in AddPac APOS Internetworking Software**

- Scalability, Functionality, and Stability Features
- Advanced Call Manager Features
- Media Gateway Features
- QoS Control Features

- **Programmable Video, Audio, and Voice Services**

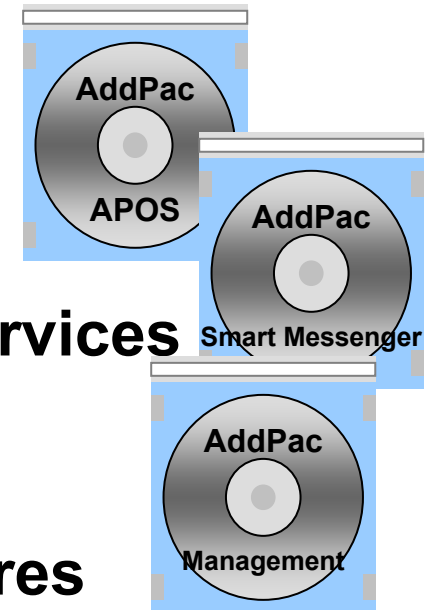
- Audio, and Voice Codec

- **Firmware Upgradeable Architecture**

- **Industry Standard Network Protocol Features**

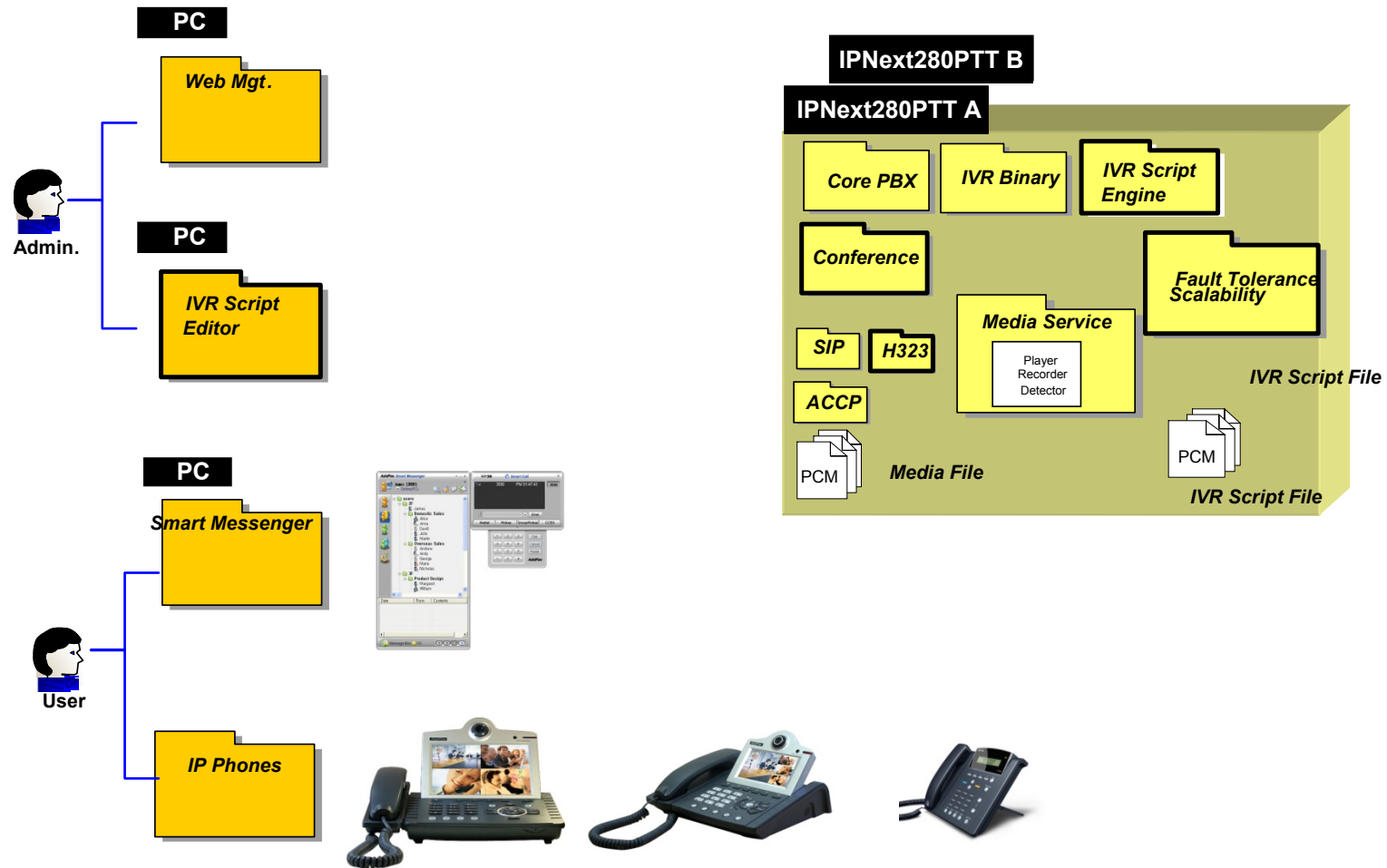
- **Highly User Friendly Management Features**

- Smart Messenger for UC
- Smart Multimedia Manager



# IP-PBX Software Components

IPNext280 PTT Next Generation Hybrid IP-PBX System



# IP Telephony Service and Features

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **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

# IP Telephony Service and Features

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **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

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **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

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **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

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **Conference**

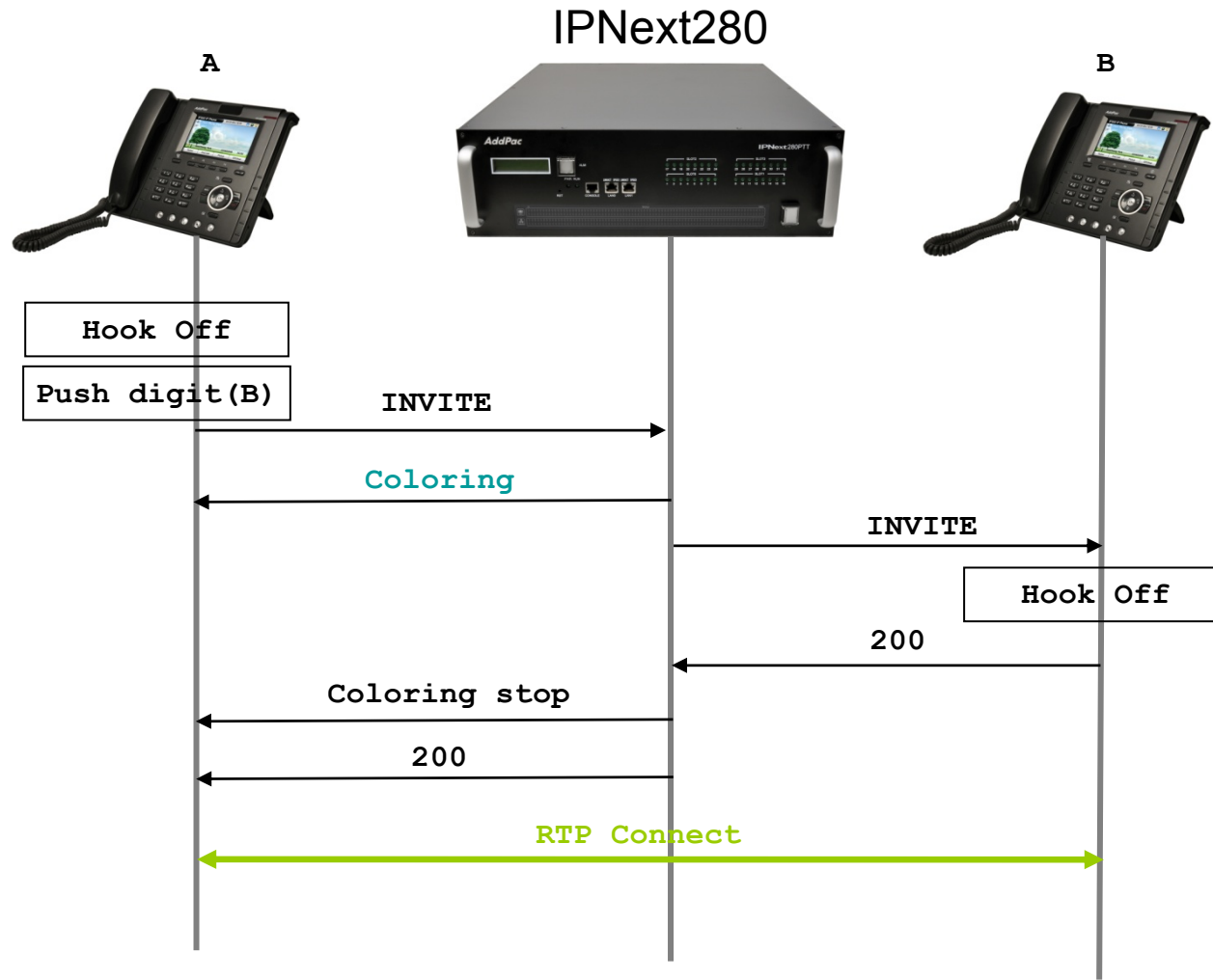
- G.711 (4-party Conference, 2 session) : basic
- G.711/G.729/G.723 (4-party Conference, 2session) Internal MCU Module : Option
- Ad-hoc Conference
- Dial-Out Conference
- Meet-me Conference
- Multiple External MCU support( Video, Audio, etc) : AddPac AP-MC1000, etc
- Conference Chair and Participants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

- **Music & Announcement**

- Music on Hold
- Replaceable Announcements
- Dialing Music / Tone Service

# SIP based Basic Call Scenario

IPNext280 PTT Next Generation Hybrid IP-PBX System

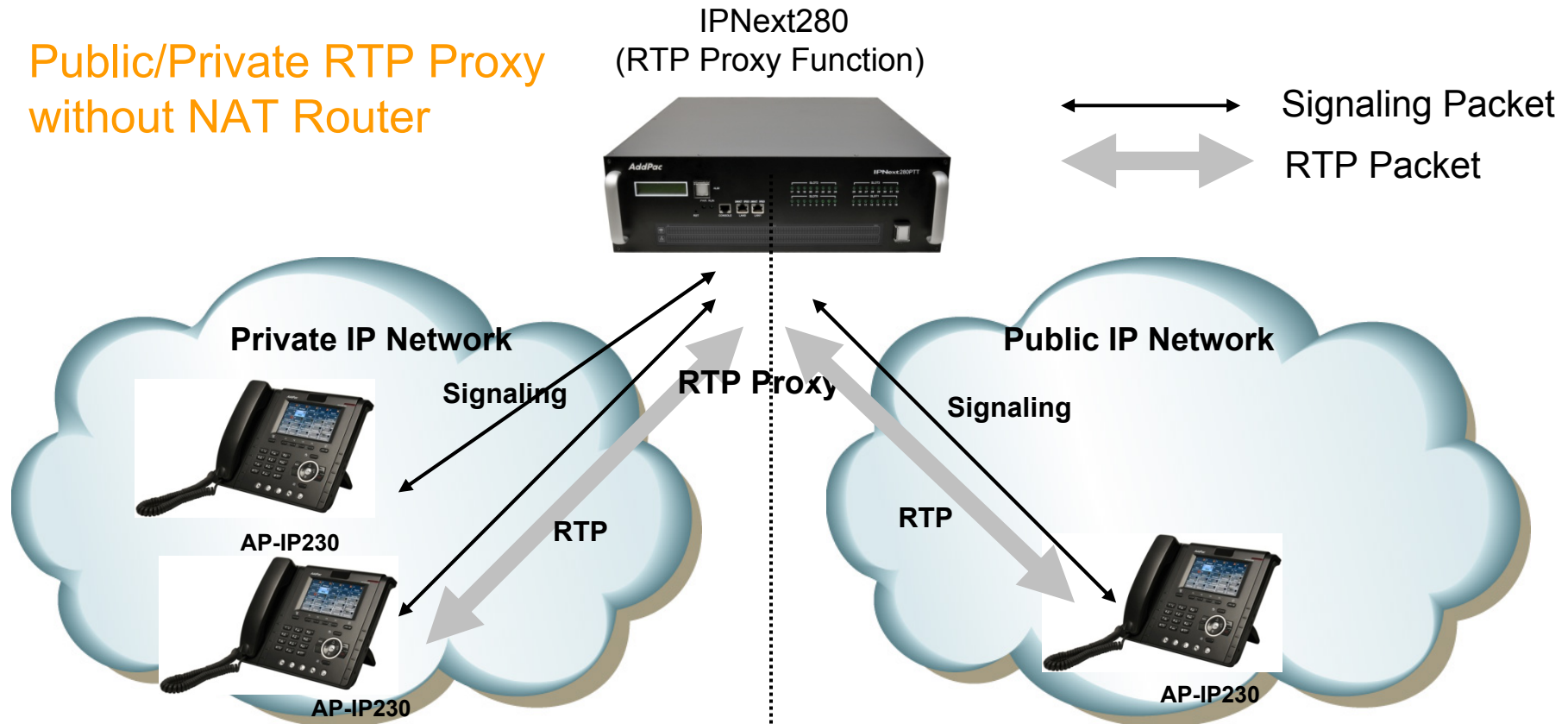




# RTP Proxy Service

IPNext280 PTT Next Generation Hybrid IP-PBX System

Public/Private RTP Proxy  
without NAT Router

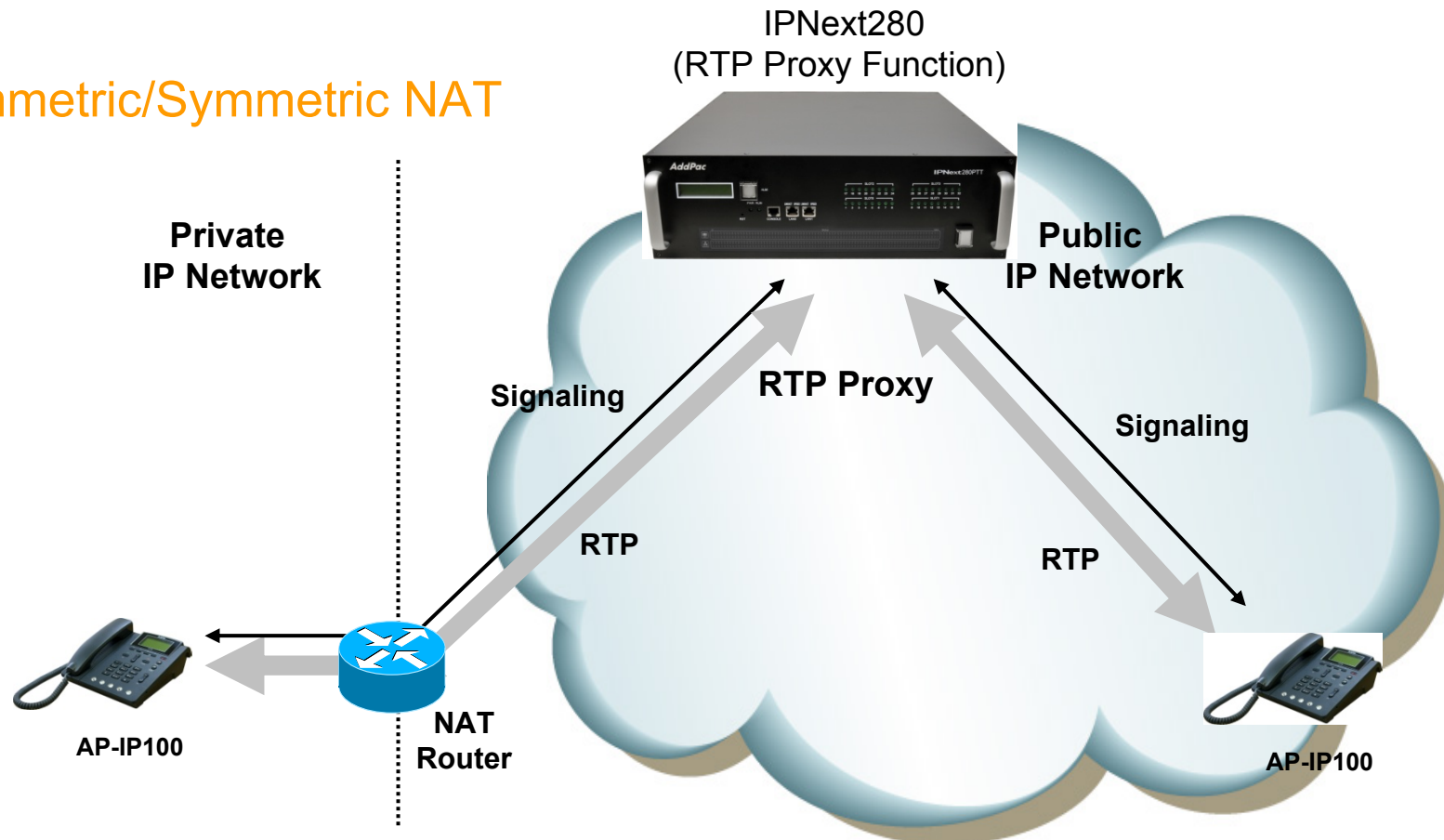


- Located between public and private network
- IPNext280(Call manager + RTP proxy) has public and private address
- IPNext280 determine that the call is internal or external

# RTP Proxy Service

IPNext280 PTT Next Generation Hybrid IP-PBX System

## Asymmetric/Symmetric NAT

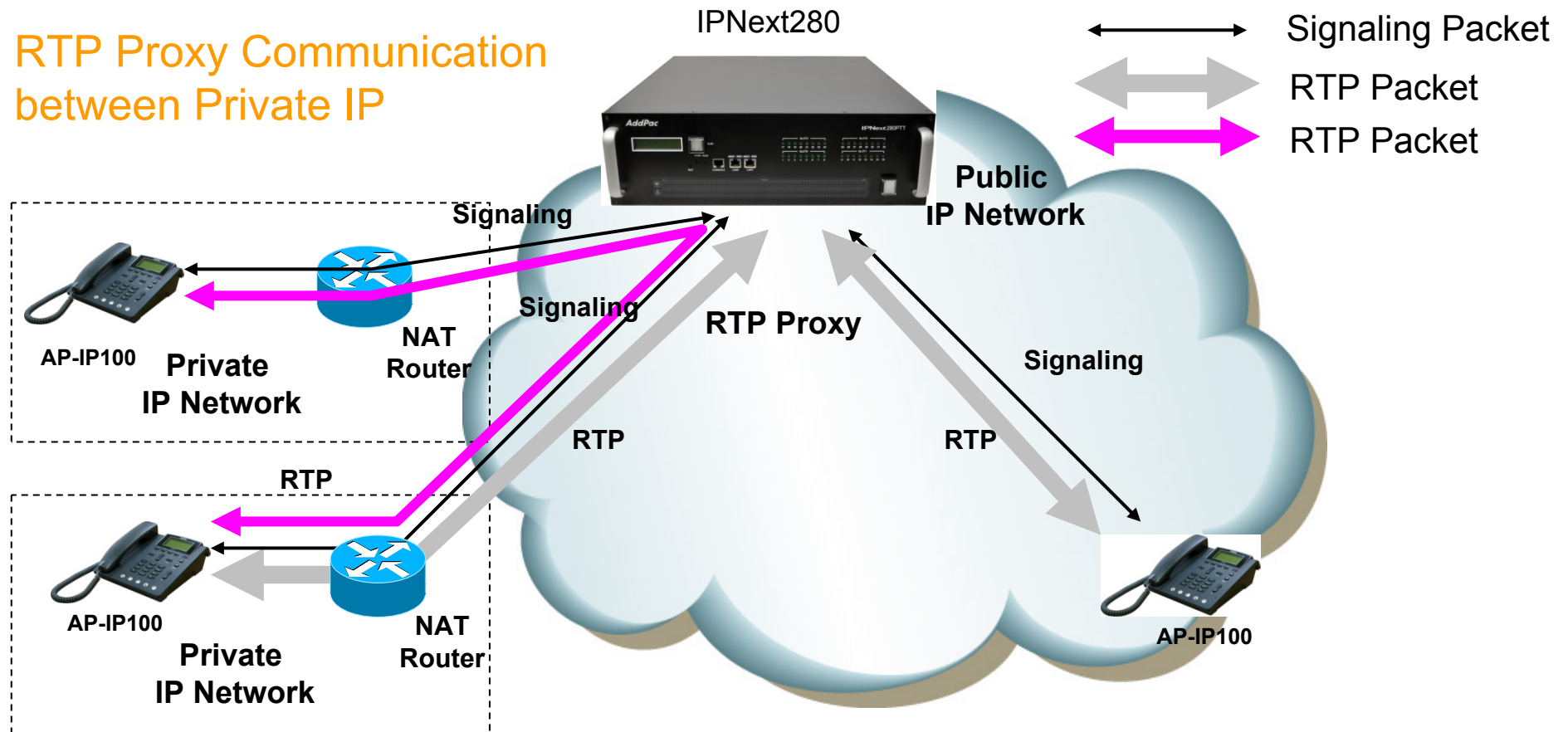


- Located in public network
- RTP Proxy has single public address
- Auto detect for asymmetric NAT via incoming RTP packet

# RTP Proxy Service

IPNext280 PTT Next Generation Hybrid IP-PBX System

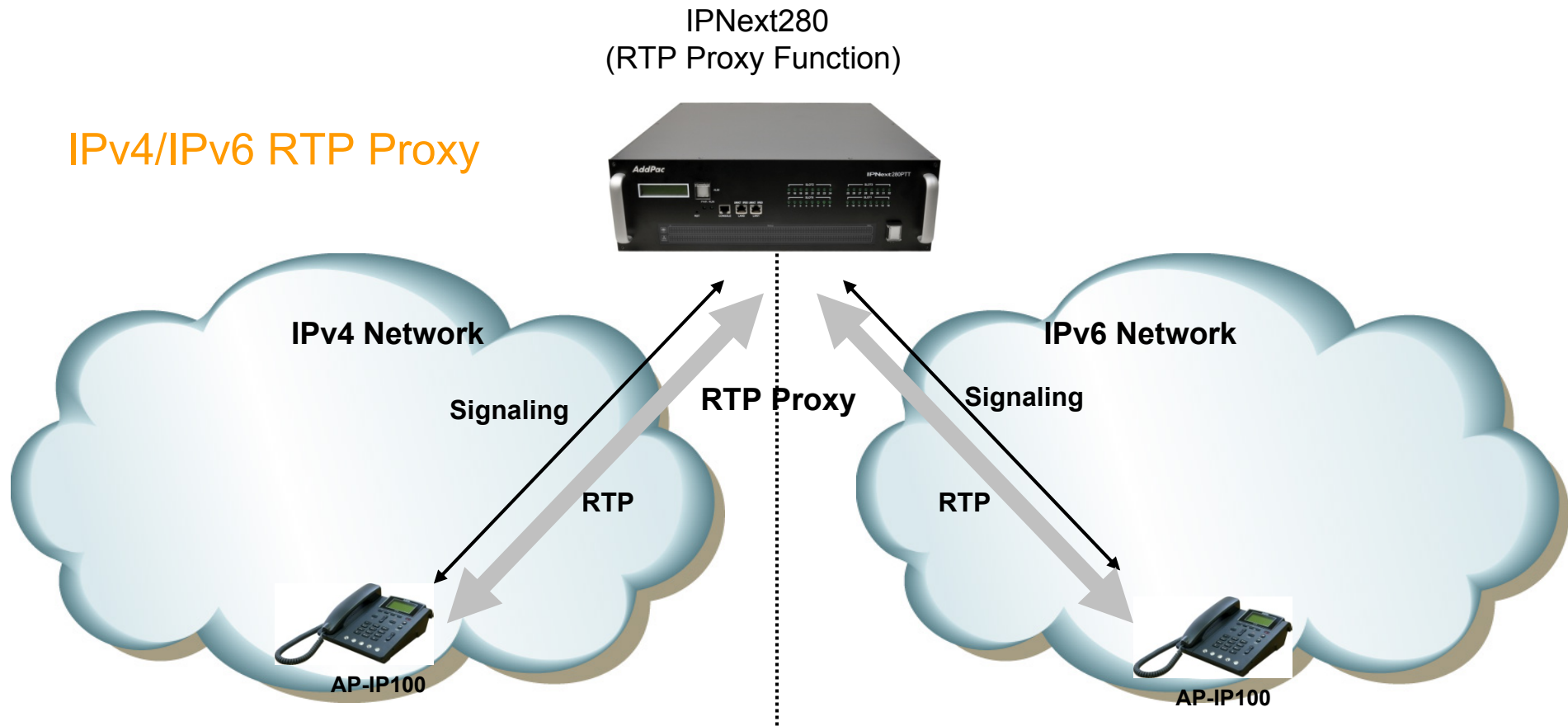
## RTP Proxy Communication between Private IP



- Located in public network
- RTP Proxy has single public address
- Auto detect for asymmetric NAT via incoming RTP packet

# RTP Proxy Service

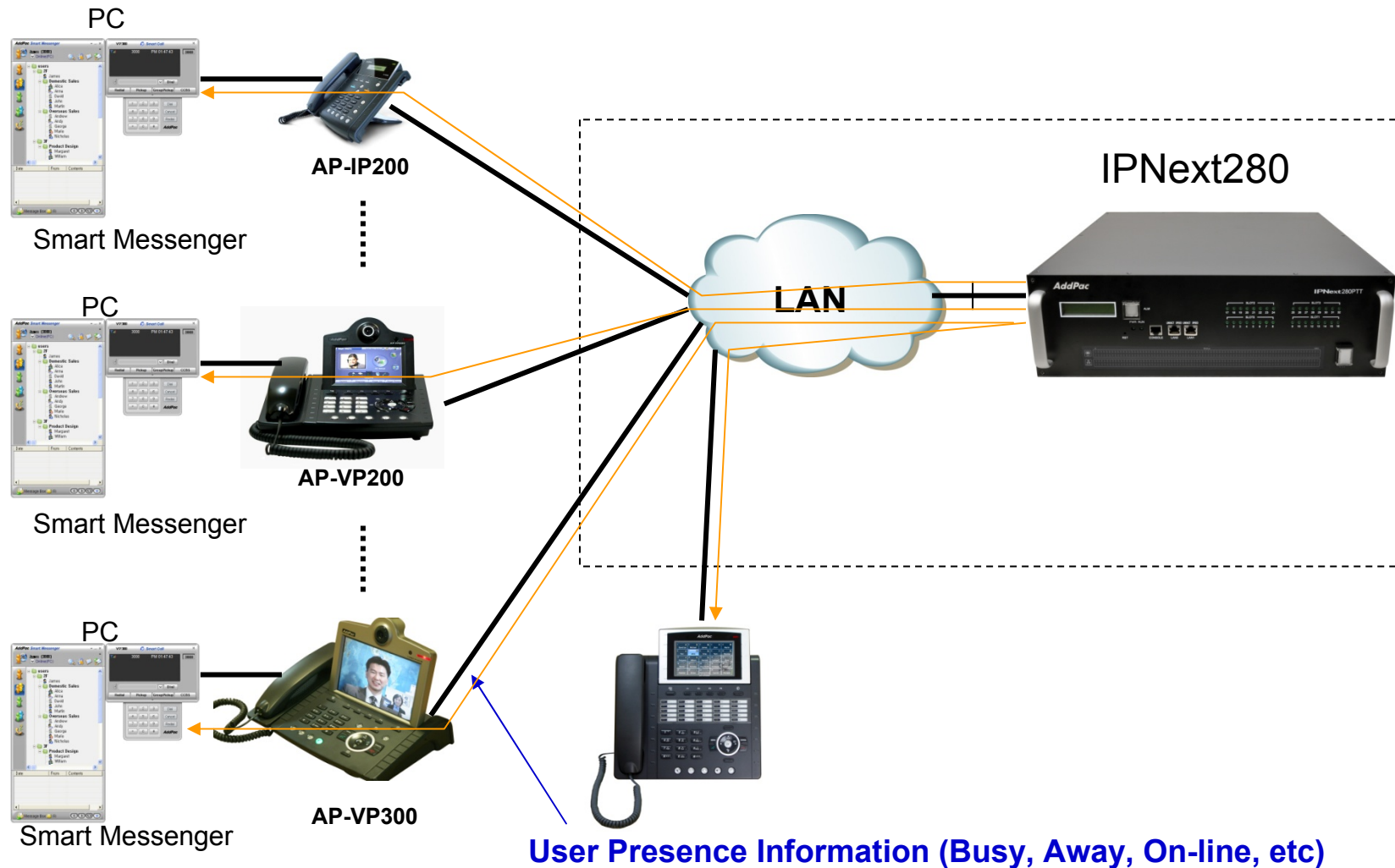
IPNext280 PTT Next Generation Hybrid IP-PBX System



- IPNext280(Call manager + RTP proxy) has IPv4 and IPv6 address

# User Presence Service for UC

IPNext280 PTT Next Generation Hybrid IP-PBX System



# Network Service and Features

IPNext280 PTT Next Generation Hybrid IP-PBX System

## **Basic Network Protocols**

- ARP, IP, IPv6, TCP, UDP, ICMP, ICMPv6, SCTP, IGMP, MLD

## **Routing Protocol**

- IPv4 : Static
- IPv6 : Static

## **Service Protocol**

- FTP, Telnet, TFTP, DHCP Server/Relay, SNMP Server
- CDP (Cisco Discovery Protocol)
- DNS Resolver , DDNS(nsupdate)
- Bridge
- Syslog
- IP/IPv6 policy control (QoS)
- VPDN (Virtual Private Dial-up Network : L2TP Server)

# Network Service and Features

IPNext280 PTT Next Generation Hybrid IP-PBX System

## **IPv4/IPv6 Interworking**

- NAT/PAT for IPv4
- IP connect (formerly ip-share) and device cascade for IPv4
- IP/IP, IP/GRE tunneling
- NAT-PT
- 6to4, Autoconfig tunneling

## **IPv4 Address Configuration**

- Fixed (Static)
- DHCP
- PPPoE

## **IPv6 Address Configuration**

- Fixed (Static)
- EUI-64
- Autoconfig (Neighbor Advertisement and Solicitation)

# Network Service and Features

IPNext280 PTT Next Generation Hybrid IP-PBX System

## **Miscellaneous**

- Cisco Style CLI
- Standard & Extended IPv4/IPv6 Access List
- Multi-level User Account Management
- IP accounting
- fsh (Embedded file system shell)
- STUN Client



# Network Service and Features

IPNext280 PTT Next Generation Hybrid IP-PBX System

## **SNMP MIBs**

- MIB-II
- RMON MIBs (Statistics, History, Alarm, Hosts Group)
- RFC2465 Management Information Base for IP Version 6: Textual Conventions and General Group
- RFC2466 Management Information Base for IP Version 6: ICMPv6 Group
- RFC2452 IP Version 6 Management Information Base for the Transmission Control Protocol
- RFC2454 IP Version 6 Management Information Base for the User Datagram Protocol
- AddPac Enterprise MIBs
- etc

# PTT Server Service

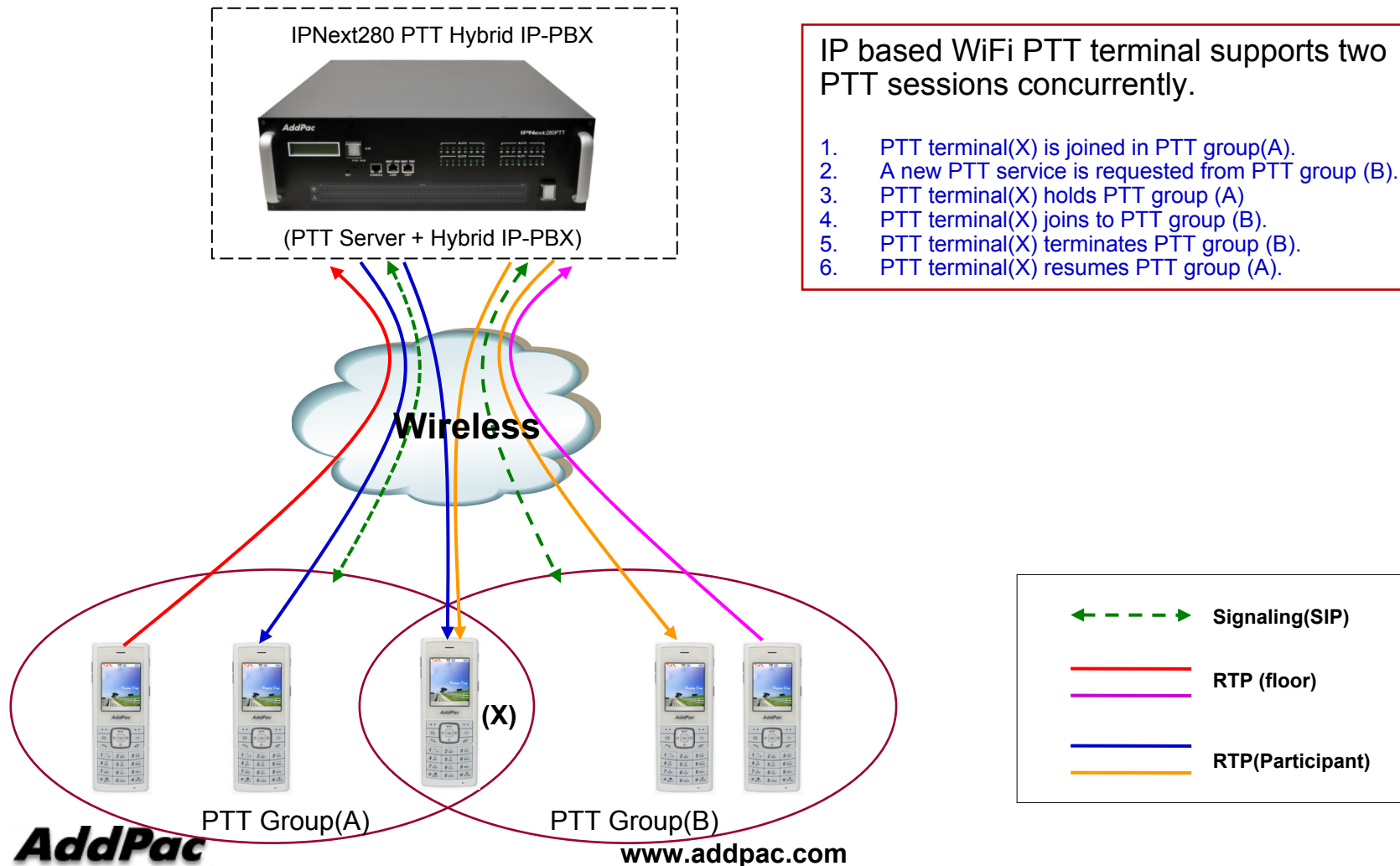
IPNext280 PTT Next Generation Hybrid IP-PBX System

- IP based PTT Service Support
- Dial-Out based PTT Service Support
  - Multi-Session , Multi-Group
  - PtP (Point-to-Point) Service
- Advanced PTT Server Features
  - 1:1 PTT
  - Group PTT
  - Emergency PTT with Alarm Notification
- Emergency PTT Service Support
- IP-PBX Interworking Service
- IP Terminal Interworking Service (Wi-Fi Phone, IP Phones, Soft Phone, Smart Phone Application)
- PTT Solution with Outstanding Network Service Capability

# IP based PTT Call Service Examples(1/3)

IPNext280 PTT Next Generation Hybrid IP-PBX System

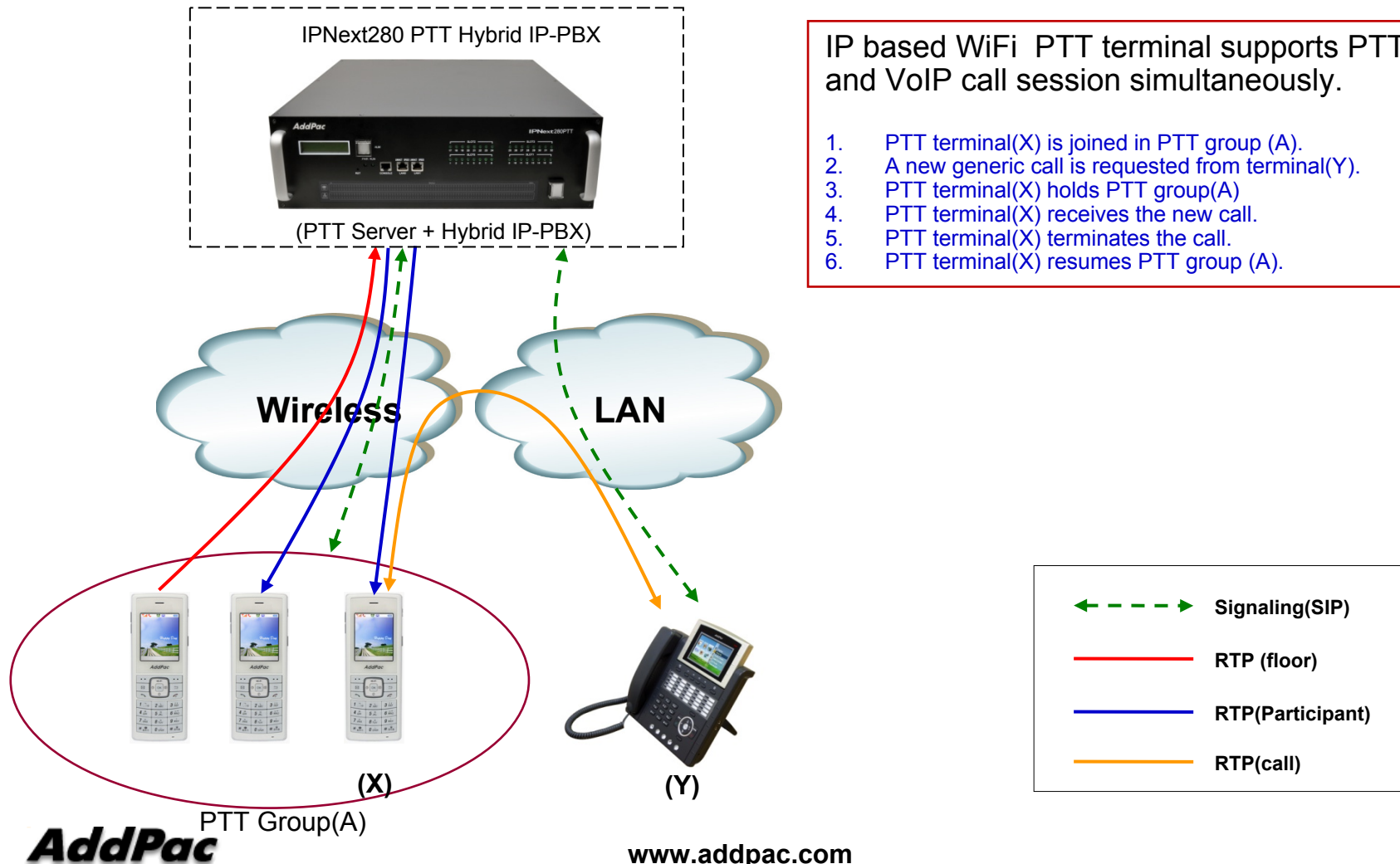
## Multi PTT Group Support



# IP based PTT Call Service Examples(2/3)

IPNext280 PTT Next Generation Hybrid IP-PBX System

## Simultaneous PTT and VoIP Call



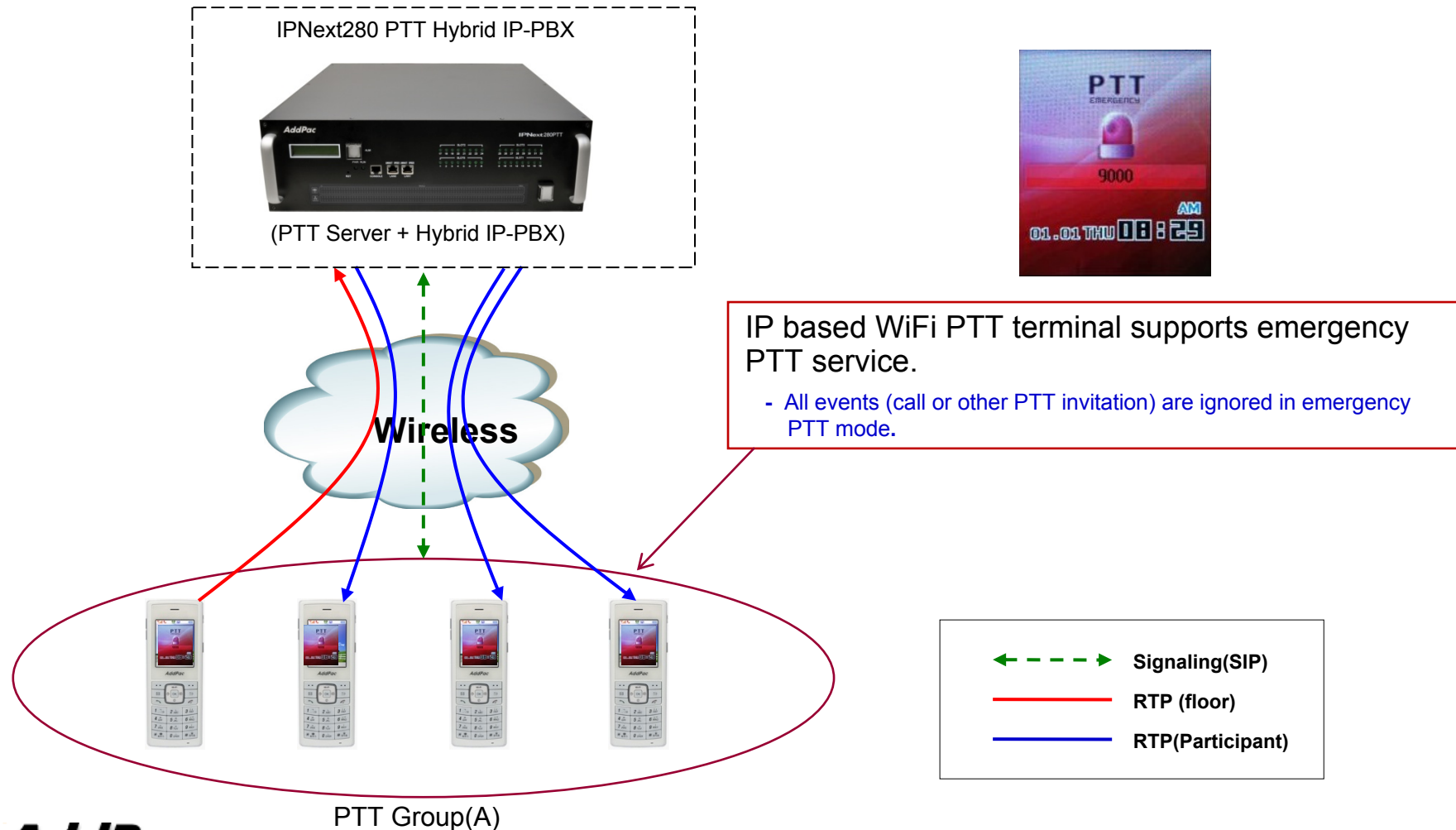
IP based WiFi PTT terminal supports PTT and VoIP call session simultaneously.

1. PTT terminal(X) is joined in PTT group (A).
2. A new generic call is requested from terminal(Y).
3. PTT terminal(X) holds PTT group(A)
4. PTT terminal(X) receives the new call.
5. PTT terminal(X) terminates the call.
6. PTT terminal(X) resumes PTT group (A).

# IP based PTT Call Service Examples(3/3)

IPNext280 PTT Next Generation Hybrid IP-PBX System

## Emergency PTT



# User Terminals

## IPNext280 PTT Next Generation Hybrid IP-PBX System

- AP-VP500 Video Phone
- AP-VP350 MCU Video Phone
- AP-VP300 Video Phone
- AP-VP280 Video Phone
- AP-VP250 Video Phone
- AP-VP230 Video Phone
- AP-VP150 Video Phone
- AP-VP120 Video Phone
- AP-IP300 Premium IP Phone
- AP-IP230 IP Phone
- AP-IP160 IP Phone
- AP-IP120 IP Phone
- AP-IP90 IP Phone
- AP-WP100 WiFi Phone
- AP-SMP100 Soft Phone



AP-VP500



AP-VP300



AP-VP150



AP-VP120



AP-IP300



AP-WP100











AP-IP160



AP-IP120







# IP Video Phone Comparison Table

IPNext280 PTT Next Generation Hybrid IP-PBX System

	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

# IP Phone Comparison Table

## IPNext280 PTT Next Generation Hybrid IP-PBX System

	AP-IP300 	AP-IP250 	AP-IP230 	AP-IP160 	AP-IP120 	AP-IP90 
LCD Size	4.3 Inch Color LCD	4.3 Inch Color LCD	5 Inch Color LCD	4 Text Line Graphic LCD	4 Text Line Graphic LCD	4 Text Line Graphic LCD
Touch Screen	N/A	Support	Support	N/A	N/A	N/A
Speed-Dial Keys	25 Key with Presence LED	Touch Screen based 25 Keys	Touch Screen based 25 Keys	16 Key with Presence LED	12 Key with Presence LED	N/A
Voice Codec	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723
Signaling	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
3-Party Conversation	Support	Support	Support	Support	Support	Support
LAN Port	2	2	2	2	2	2
PoE(Optional)	Support	Support	Support	Support	Support	Support
FXO(Optional)	Support	Support	Support	Support	Support	Support



# Smart Messenger for UC

IPNext280 PTT Next Generation Hybrid IP-PBX System

- **Smart Messenger Program**

- PC based MS-Window Program
- Support Messenger Service
- Support Various Address Book
- Support User Presence Information (Busy, Away, On-line, etc)
- Support User Search Feature
- Interoperation with Address Book and Smart Phone
- Support Smart Phone Control and Setup
  - Call Control and Forward Setup
- Support Unified Message Box
  - Voice Mail Box
  - Short Message Box



**Smart Messenger**

# SMM for PTT (User Friendly Management)

IPNext280 PTT Next Generation Hybrid IP-PBX System

Easy Configuration Tool Support

Group Properties

General Participants

Group Name: Push-to-Talk#8000-NightGuards

Description: Push-to-Talk conference session for night guards

Number: 4050

Partition: N/A Edit

Audio Codec Class: default Edit

Group Priority: 3 (Zero is high priority)

Max Session Idle Time: 60 seconds

Max Floor Hold Time: 30 seconds

Close on Chair Out

Ok Cancel

Easy Drag and Drop Configuration

Group Properties

General Participants

Filter

Filter Name: Phone Number Rule: Begins with Word: Advanced Search Find

Number	Partition	User
1000		
1018		bd seong
2000		
2010		
2011		
2012		
2013		
2014		
2015		

Enter External Phone Number

Add

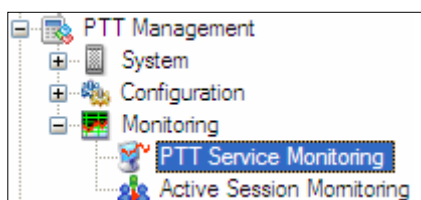
Number	Partition	User	Type
2010			Internal
2014			Internal

Ok Cancel

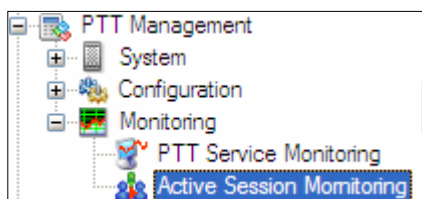
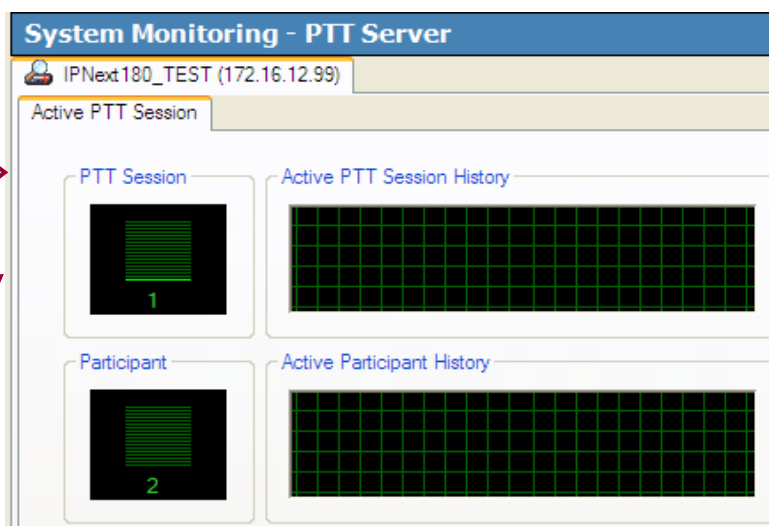
Easy PTT Session Creation & Various Option Support

# SMM for PTT (Active PTT Session Monitoring)

IPNext280 PTT Next Generation Hybrid IP-PBX System



You can monitor the current resource usage of PTT servers through this window.



You can monitor the list of active PTT sessions and participants information of the sessions.

PTT Active Session Monitoring  
172.16.12.99

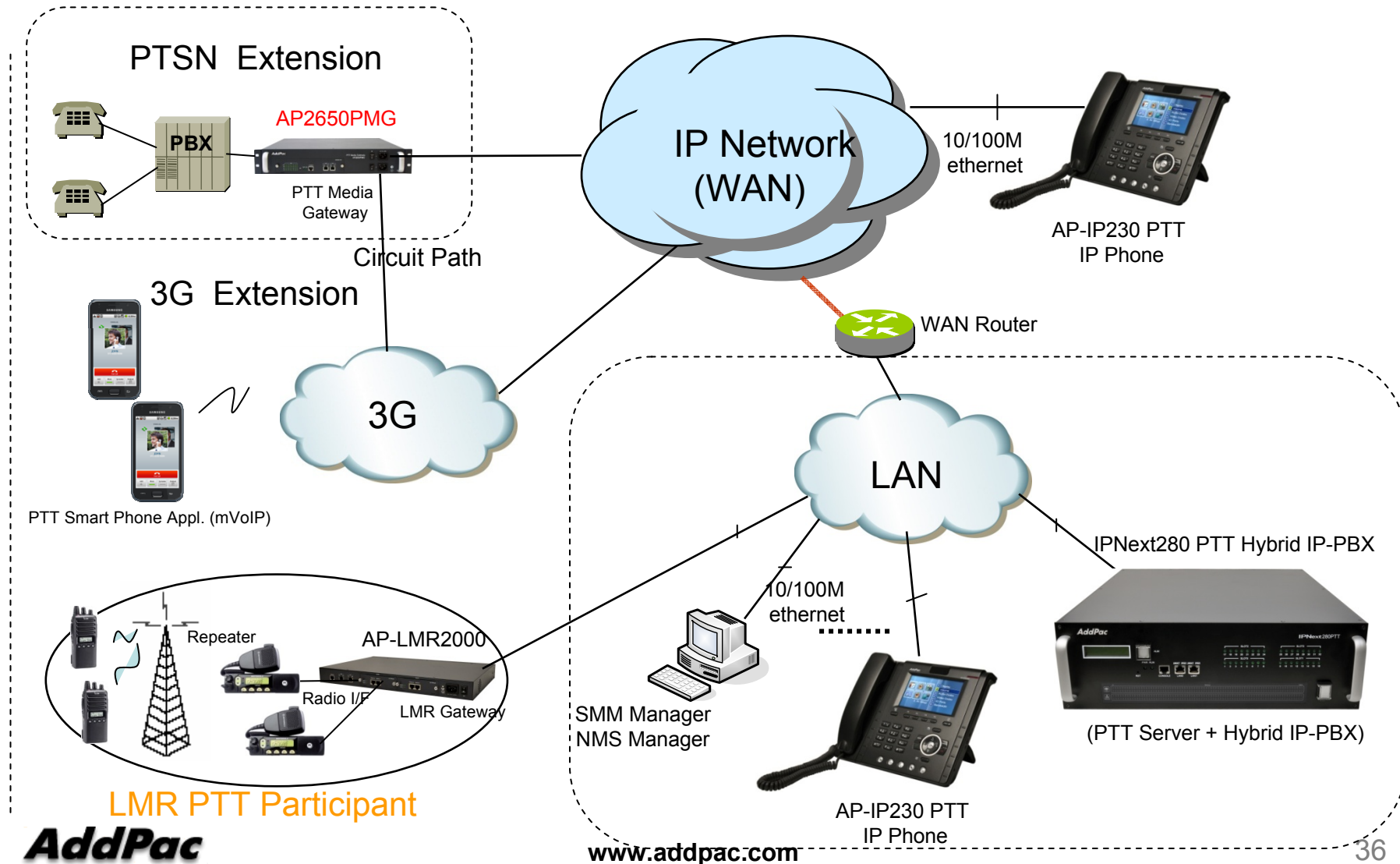
Sessions				
Name	Number	Start Time	Duration	No. of Participant
Conference #1000	1212	20100101-17:48:59	00:01:15	2

Participants			
Participant Name	Phone Number	IP	Status
kn kim	7000	172.16.50.123	Joined
bd seong	1018	172.16.253.117	Joined

# Standard PTT Hybrid IP-PBX System Application

## IPNext280 PTT Next Generation Hybrid IP-PBX System



# Ordering Information

- **IPNext280 PTT Hybrid IP-PBX System**
  - IPNext280 PTT Hybrid IP-PBX System Main Body
  - High-performance 64bit RISC CPU
  - 2-ports 10/100Mbps Fast Ethernet and 1-port RS-232C Console
  - Dual Power Supply Module
  - Including Network Cable Set & Power Supply Cable, etc.
  - VoIP Interface Modules (Option)
- **Built-in APOS Internetworking Software for IPNex280PTT**
- **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!

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