

# IPNext-MX280

## Mobile Hybrid IP-PBX System

High-performance Next Generation Mobile Hybrid IP-PBX System

### Preliminary Product Overview



**AddPac**

**AddPac Technology**

Sales and Marketing

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# Contents

- Product Overview
- Hardware Specification
- GSM Module Specification
- CDMA Module Specification
- Software Service
- Mobile IP-PBX Service and Features
- RTP Proxy Service
- User Presence Service
- Network Service and Features
- AddPac IP Multimedia Terminals
- Application Area
- Ordering Information

# Product Overview

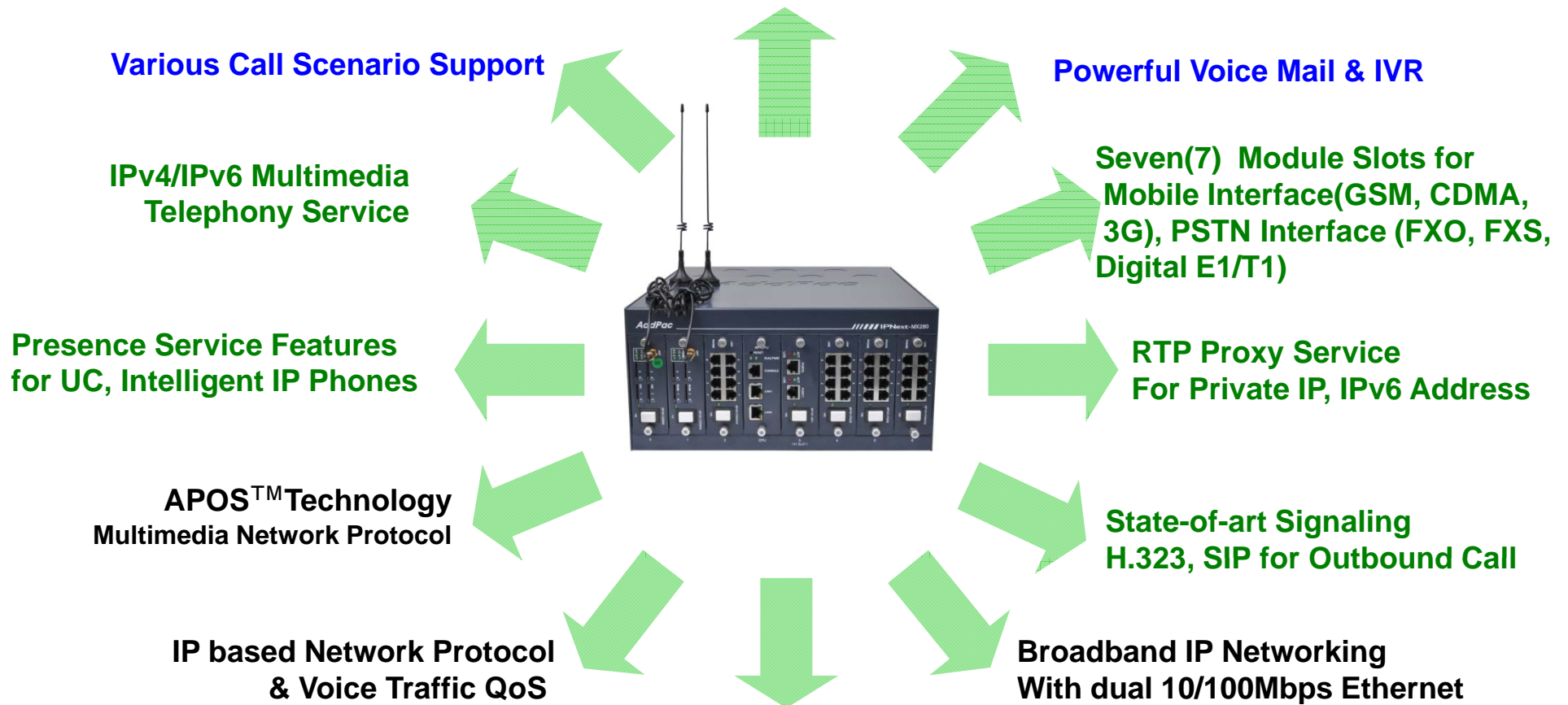
## IPNext-MX280 Mobile Hybrid IP-PBX System

- IP based Advanced Mobile IP-PBX Solution
- IPv4/IPv6 Multimedia Telephony Solution for Small&Medium Office
- PSTN Interface (FXO, FXS, Digital E1/T1) Support
- **GSM/CDMA/3G/Bluetooth Interface 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 Phone, Video 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 Multimedia Terminal Support

# Product Highlights

IPNext-MX280 Mobile Hybrid IP-PBX System

## IP based Advanced Mobile Hybrid IP-PBX System



# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

IPNext-MX280 Mobile Hybrid IP-PBX System	Basic Specification	
Voice Interface	Seven(7) VoIP Module Slots	
	PSTN Interface	AP-N1-FXS8, AP-N1-FXO8, AP-N1-FXS4O4, AP-N1-E1, AP-N1-2E1, etc
	Mobile Interface	AP-N1-GSM4, AP-N1-CDMA4, AP-N1-3G4, etc
Ethernet Interface	2-Ports 10/100Mbps Ethernet Interface(RJ-45)	
Flash Memory	2Gbyte NAND Flash Memory	
Main Memory	512Kbyte DDR2 Memory	
Power Requirement	Power Supply / VAC 110~220V, 50/60Hz, 5V 30A	
Operating Temperature	0°C ~ 45°C (32 °F ~ 122°F)	
Storage Temperature	-40°C ~ 85°C (-40°C ~ 185°F)	
Relative Humidity	5% ~ 95% (Non-condensing)	
Dimensions	H x W x D (147mm x 303.5mm x 330mm )	
Weight(kg)	7.3Kg	

# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

- **RISC Microprocessor Computing Power**
- **Main Chassis**
  - **CPU Module**
    - Two(2) 10/100Mbps Fast Ethernet
    - One(1) RS-232C Console (RJ45)
  - **Seven(7) VoIP Module Slots**
    - PSTN Interface : FXS, FXO, Digital E1/T1
    - Mobile Network Interface : GSM, CDMA, 3G, Bluetooth
  - **Hot-Swap VoIP Module**

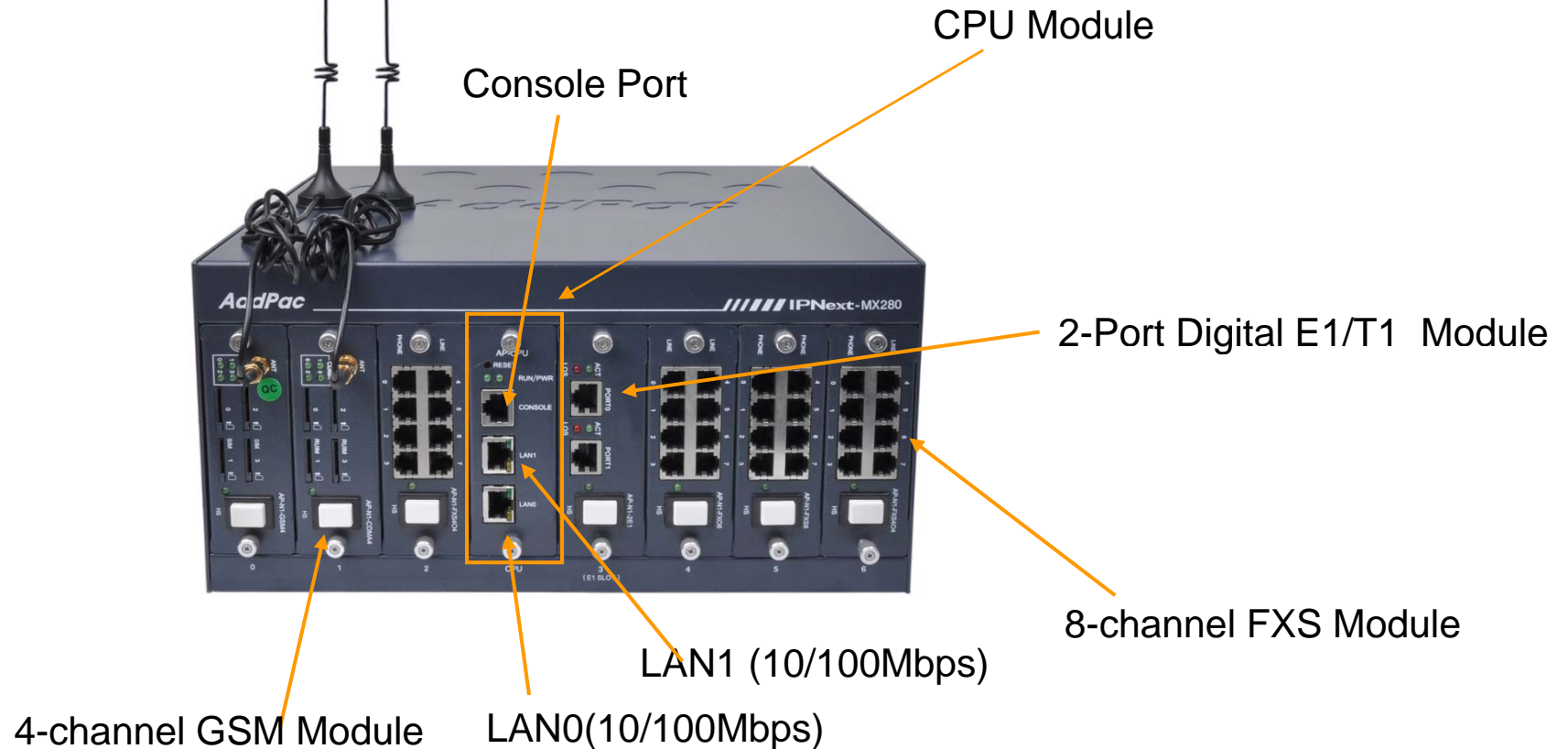
# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

## IPNext-MX280 Front Side



# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

## IPNext-MX280 Back Side





# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

## PSTN VoIP Modules

**AP-N1-FXS8** 8-Port FXS Module



**AP-N1-FXO8** 8-Port FXO Module



**AP-N1-FXS4O4** 4-Port FXS&4-Port FXO Module



**AP-N1-E1** 1-Port Digital E1/T1 Module



**AP-N1-2E1** 2-Port Digital E1/T1 Module



# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

## Mobile VoIP Modules

**AP-N1-GSM4** 4-Port GSM Module



**AP-N1-CDMA4** 4-Port CDMA Module



**AP-N1-3G4** 4-Port 3G Module



# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

SIM Card Slot



AP-N1-GSM4  
(4-Port GSM Module)

GSM Antenna  
Internal 4Ch Combiner

Port LEDs

Hot-Swap Switch

# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP

RUIM Card Slot



AP-N1-CDMA4  
(4-Port CDMA Module)

CDMA Antenna  
Internal 4Ch Combiner

CDMA Port LED

Hot-Swap Switch

# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP



AP-N1-FXS8  
(8-Port FXS Module)

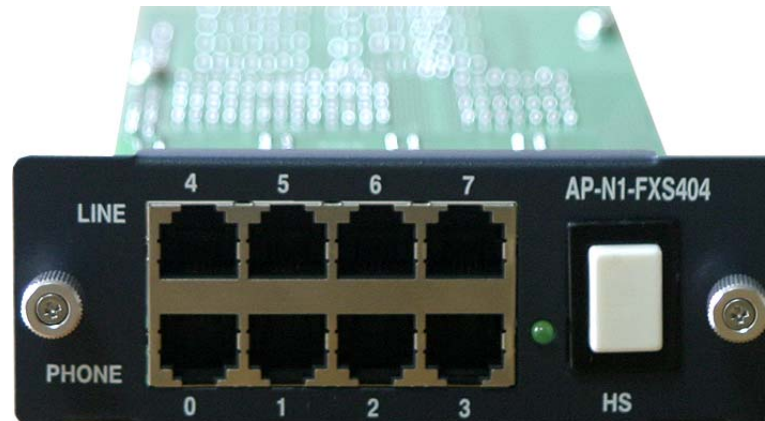
AP-N1-FXO8  
(8-Port FXO Module)

# Hardware Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

DSP



AP-N1-FXS404  
(4-Port FXS-  
4-Port FXO Module)



AP-N1-E1  
(Digital E1/T1 Module)

# Hardware Specification

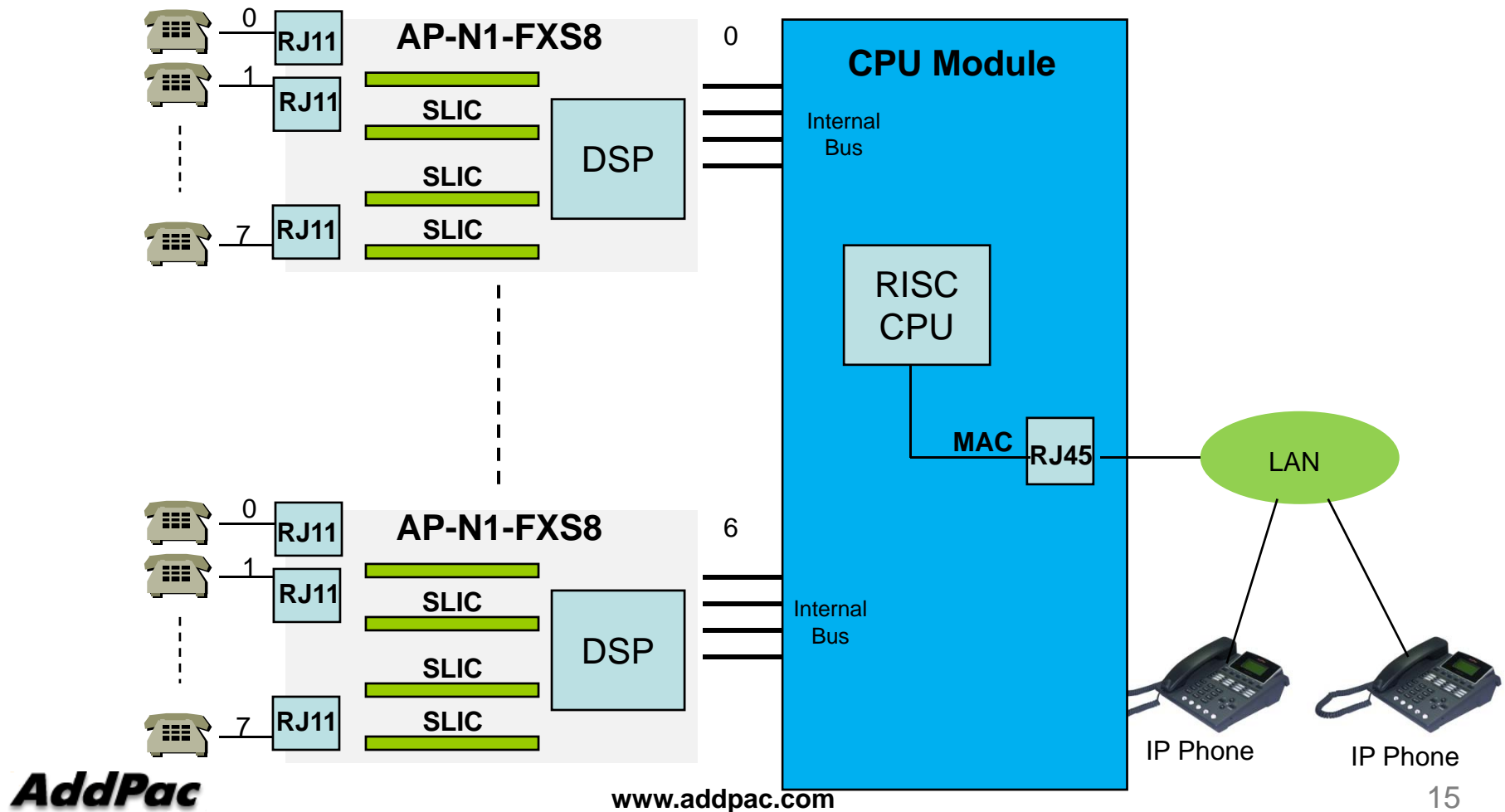
IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

## IPNext-MX280 VoIP Module Combination Diagram

56-Port(8x7Module) FXS Gateway Service Diagram



# Hardware Specification

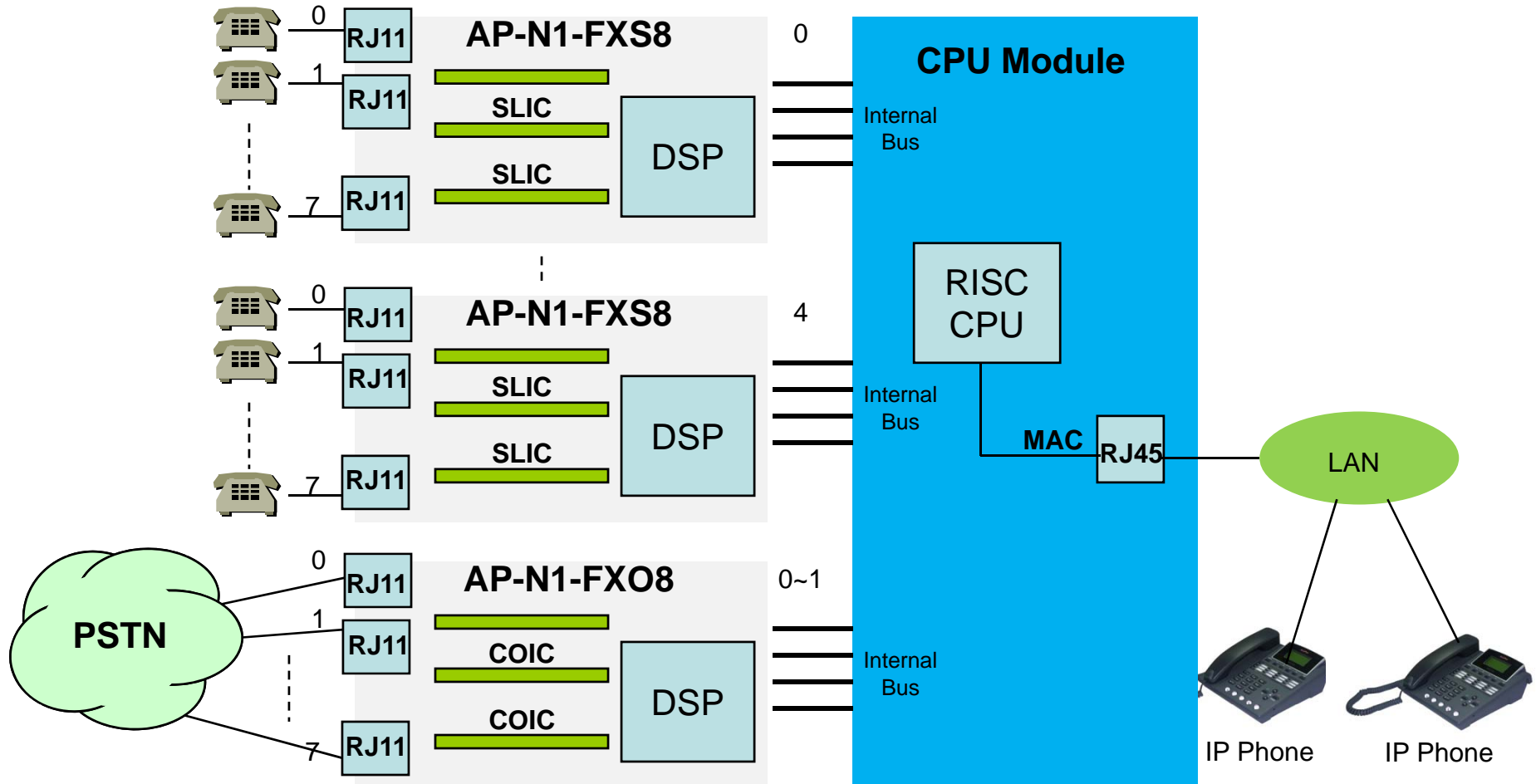
IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

## IPNext-MX280 VoIP Module Combination Diagram

40-Port(8x5Module) FXS + 16 Port (8x2 Module) FXO Gateway Service Diagram





# Hardware Specification

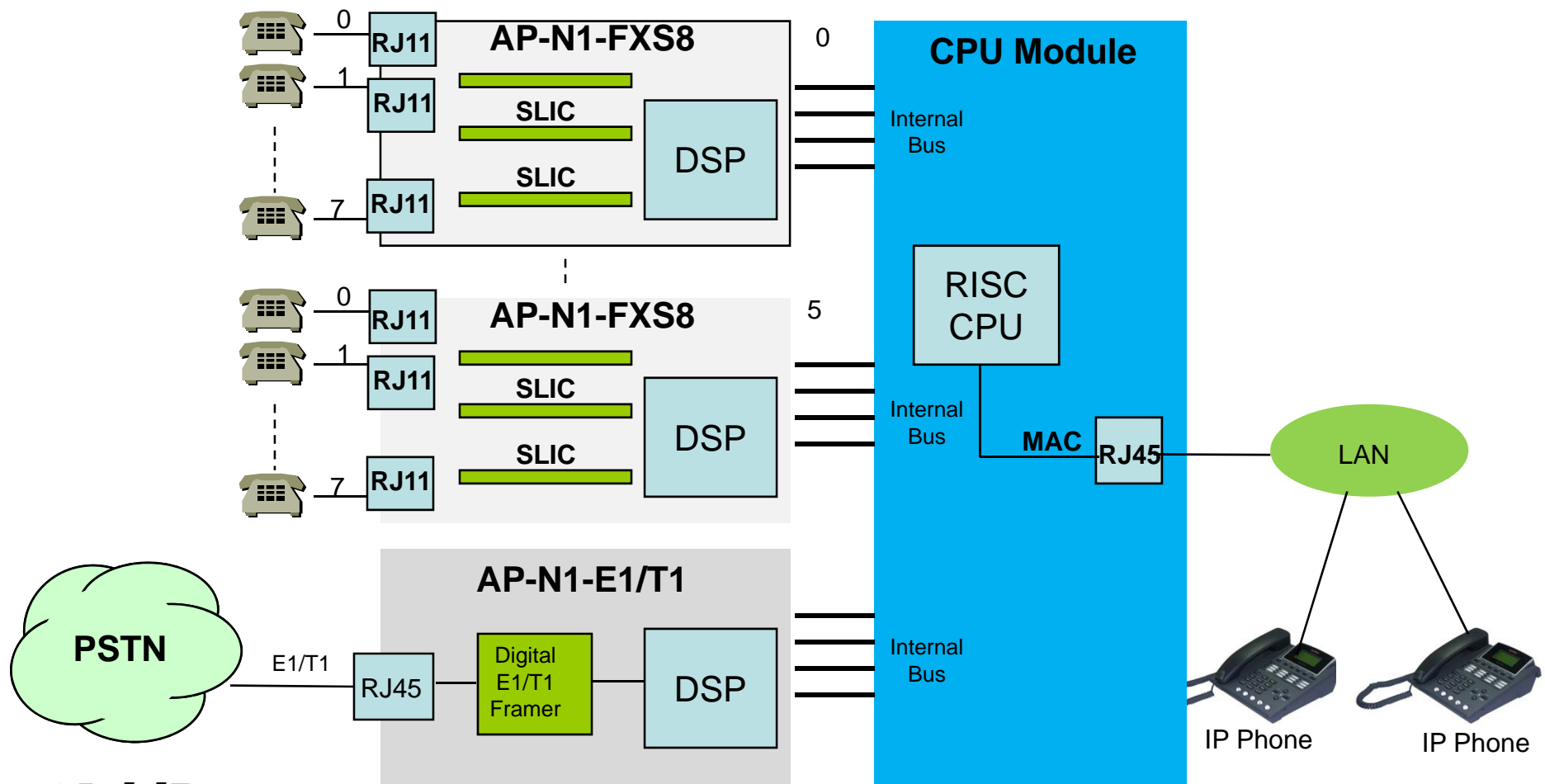
IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

## IPNext-MX280 VoIP Module Combination Diagram

48-Port(8x6Module) FXS + 1 Port Digital E1 Gateway Service Diagram



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# Hardware Specification

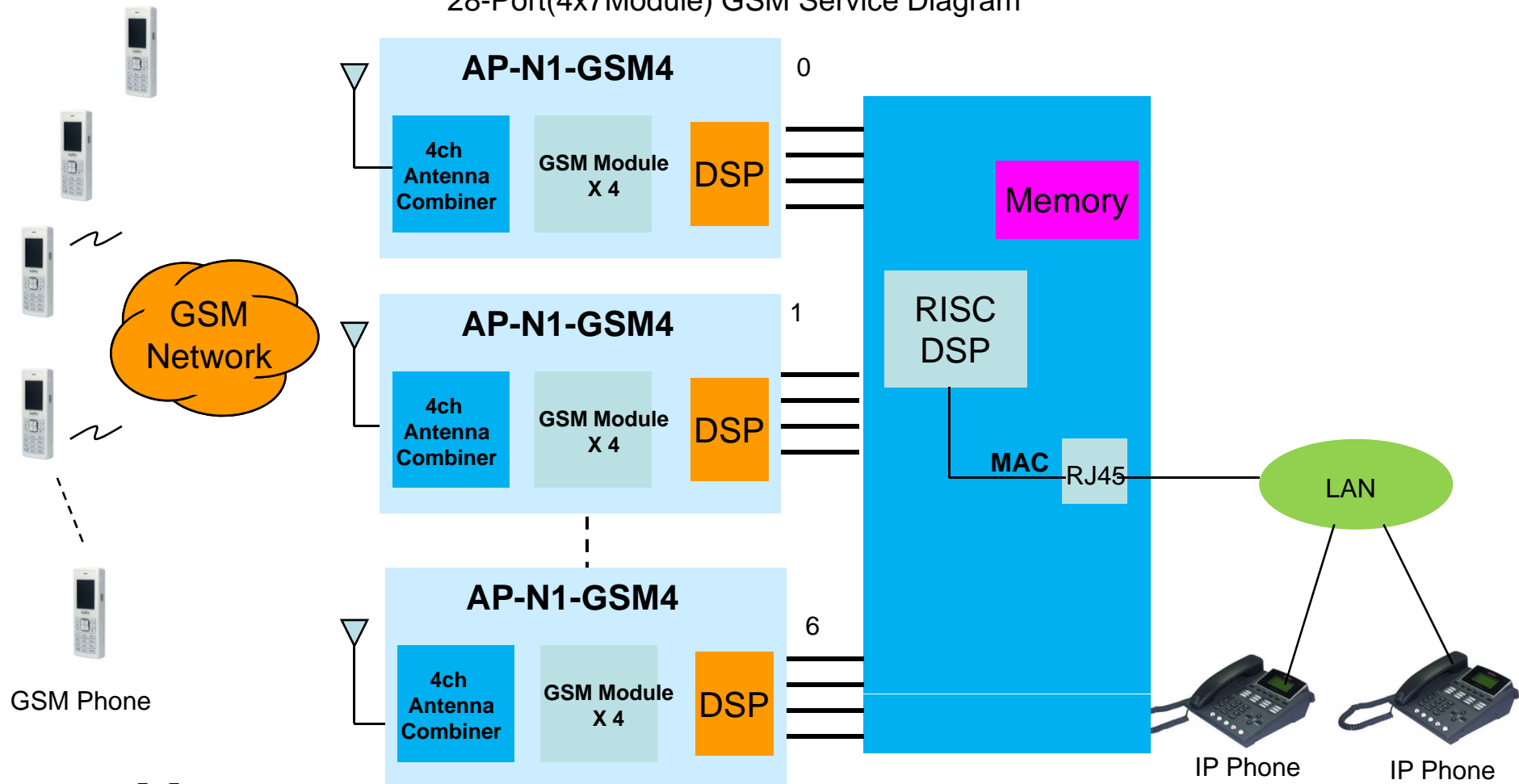
IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

## IPNext-MX280 VoIP Module Combination Diagram

28-Port(4x7Module) GSM Service Diagram



GSM Phone

IP Phone

IP Phone

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# Hardware Specification

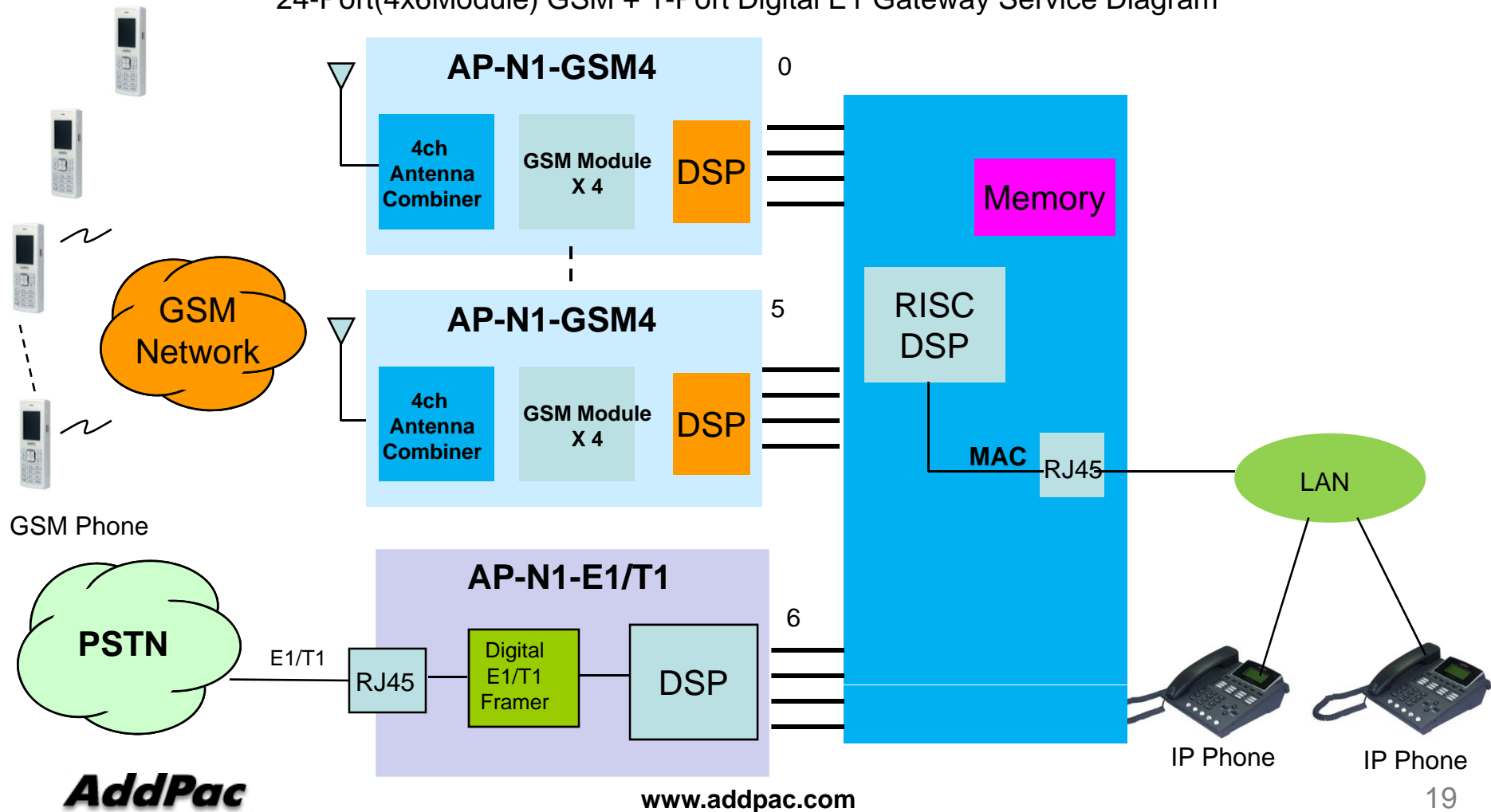
IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

## IPNext-MX280 VoIP Module Combination Diagram

24-Port(4x6Module) GSM + 1-Port Digital E1 Gateway Service Diagram



# GSM Module Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

- Bearers : GSM + GPRS class 10
- Quad-Band EGSM 850/900/1800/1900MHz
- Normal Sensitivity
  - 850MHz Rx           -104 dBm
  - 900MHz Rx           -104 dBm
  - 1800MHz Rx         -102 dBm
  - 1900MHz Rx         -102 dBm
- Tx Performances
  - 850MHz Tx           +33 dBm
  - 900MHz Tx           +33 dBm
  - 1800MHz Tx         +30 dBm
  - 1900MHz Tx         +30 dBm
- Power Consumption
  - 17 uA Sleep Mode, 1.7mA Idle Mode, 400mA GPRS class10 (33 dBm)
- Codec
  - FR-EFR-HR-AMR

# CDMA Module Specification

IPNext-MX280 Mobile Hybrid IP-PBX System

RISC  
CPU

High-end  
DSP

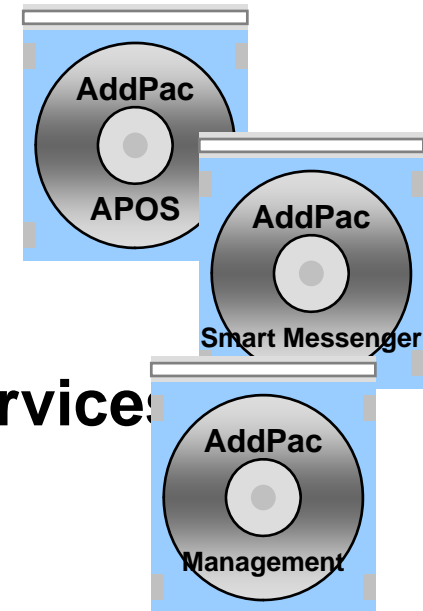
- CDMA2000 1xRTT (IS-2000)-(Dual Band)
- Band class0 (TX : 824~849 MHz / RX : 869~894MHz)
- Band class1 (TX : 1850~1910 MHz / RX : 1930~1990MHz)
- GPS L1 Support
- Output Power : 0.25W CDMA
- CDMA2000 Release A
- IS-637 : Short Message Service (Mobile Originated and Mobile Terminated)
- RUIM(for Asia Pacific Countries)
- 4-Port CDMA Module(AP-N1-CDMA4)
  - 4-Port RUIM Card Slot
  - Port LEDs for Link Activation Indication
  - One(1) CDMA Antenna Interface (Internal 4 Channel Combiner)
  - Hot-Swap Button

# Software Service

IPNext-MX280 Mobile Hybrid IP-PBX System

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

- Scalability, Functionality, and Stability Features
- Advanced Call Manager Features
- Media Gateway Features
- GSM/CDMA/3G Gateway Features
- QoS Control Features



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

- Audio, and Voice Codec

- **Firmware Upgradeable Architecture**

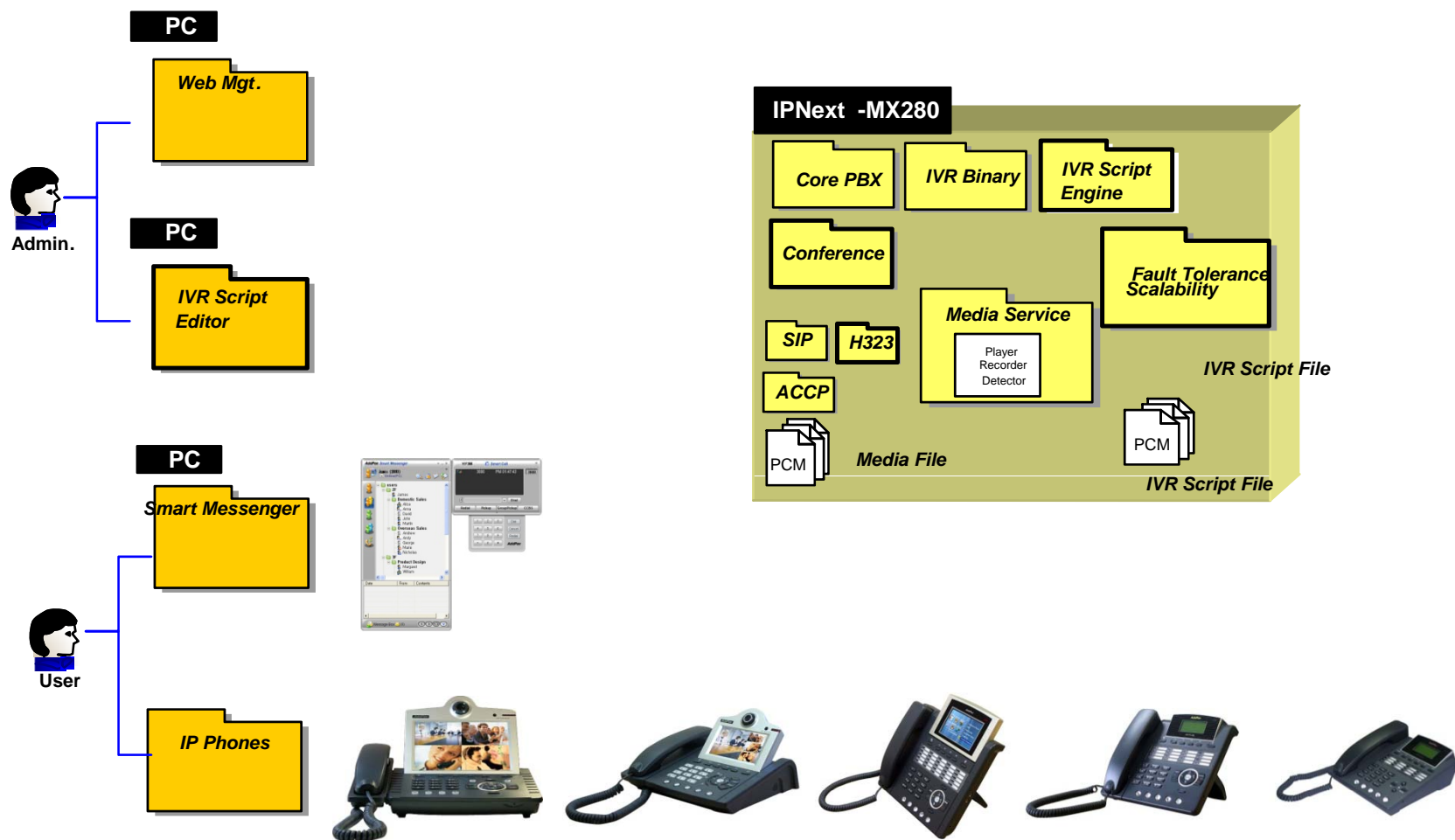
- **Industry Standard Network Protocol Features**

- **Highly User Friendly Management Features**

- Smart Messenger for UC
- Smart Multimedia Manager

# IP-PBX Software Components

IPNext-MX280 Mobile Hybrid IP-PBX System



# IP Telephony Service and Features

## IPNext-MX280 Mobile 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

## IPNext-MX280 Mobile 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

## IPNext-MX280 Mobile 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

## IPNext-MX280 Mobile 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

## IPNext-MX280 Mobile Hybrid IP-PBX System

- **Conference**

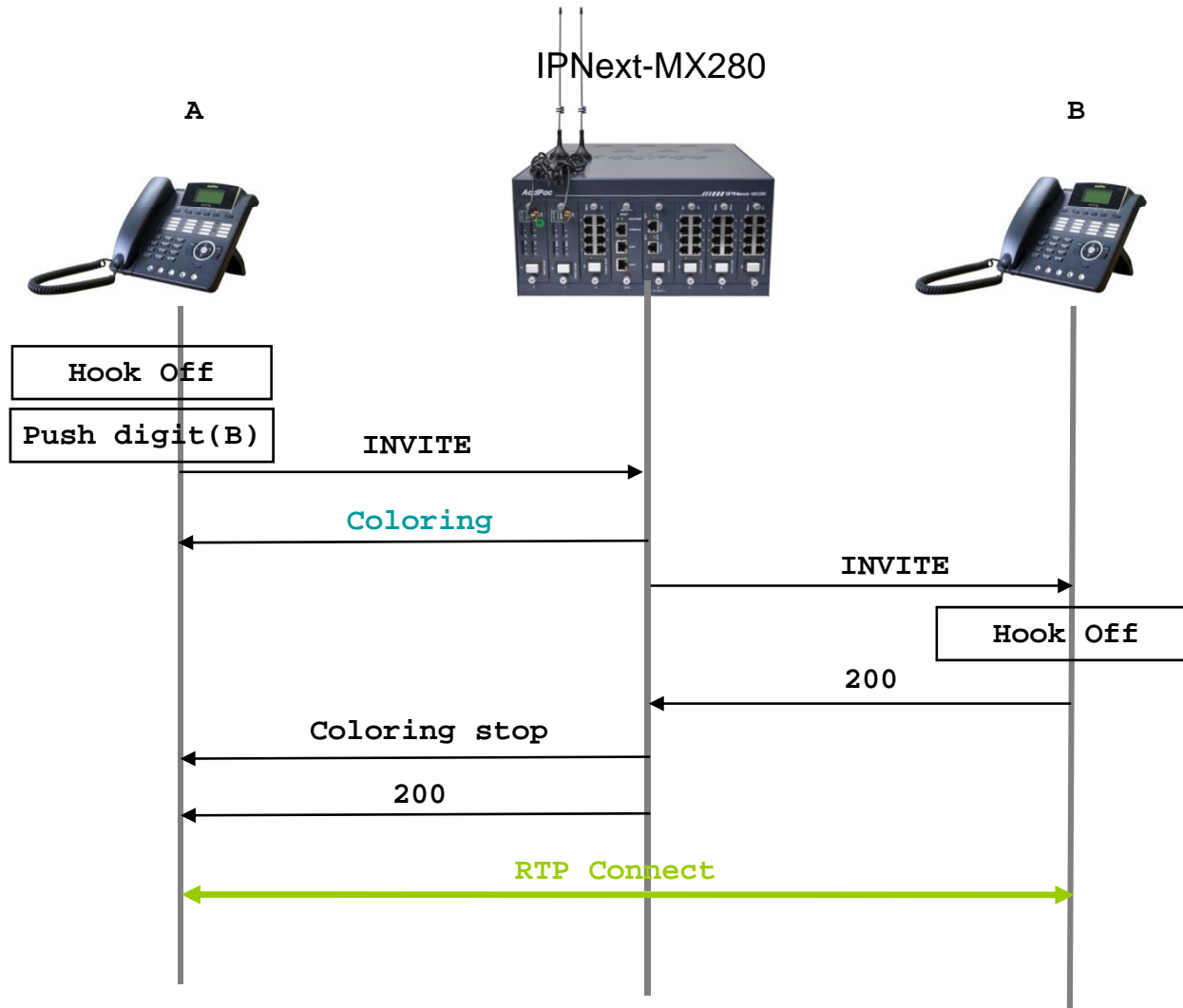
- G.711 (4-party Conference, 2 session) : basic
- Ad-hoc Conference
- Dial-Out Conference
- Meet-me Conference
- Multiple External MCU support( Video, Audio, etc) : AddPac AP-MC1000, etc
- Conference Chair and Participants Management

- **Music & Announcement**

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

# SIP based Basic Call Scenario

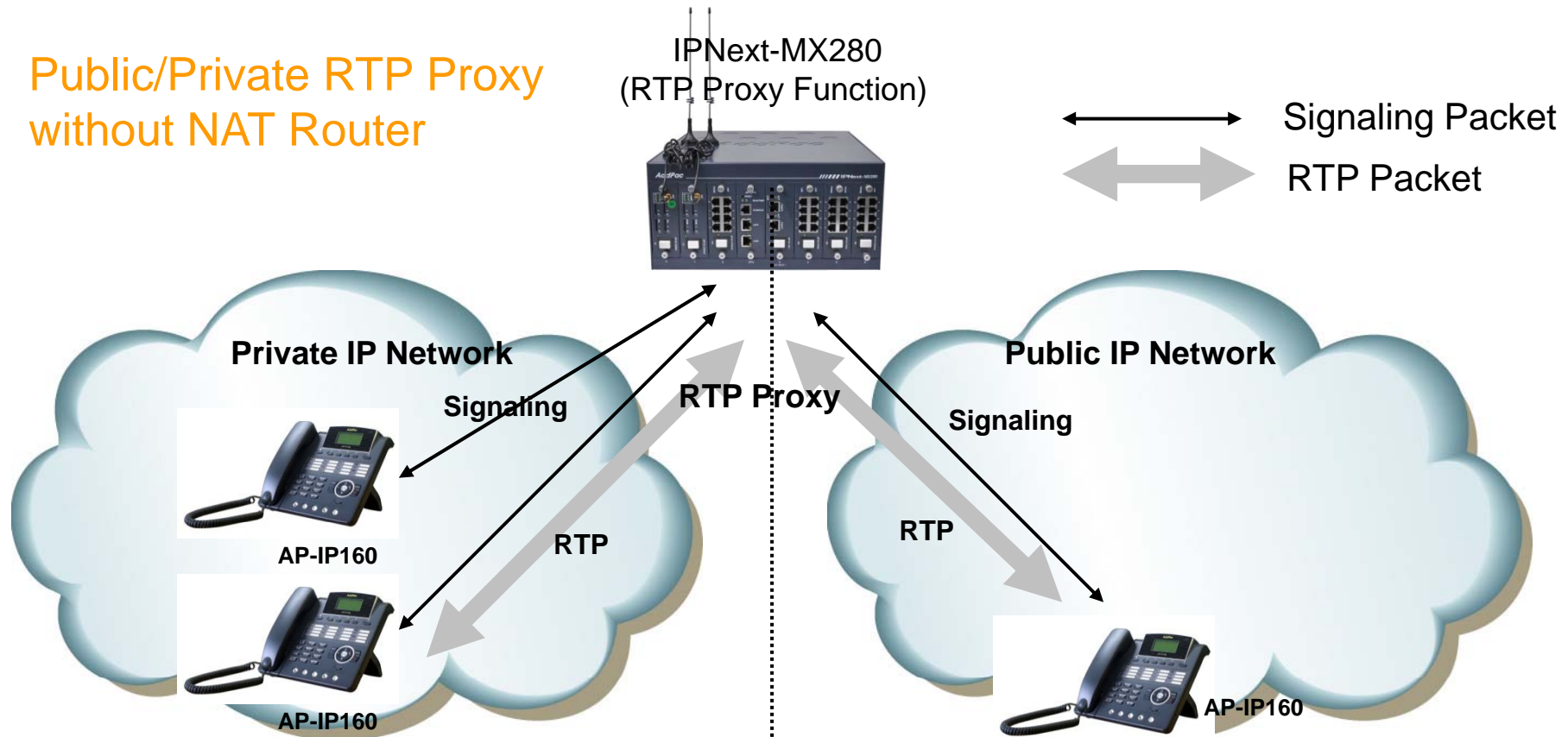
IPNext-MX280 Mobile Hybrid IP-PBX System



# RTP Proxy Service

IPNext-MX280 Mobile Hybrid IP-PBX System

Public/Private RTP Proxy  
without NAT Router

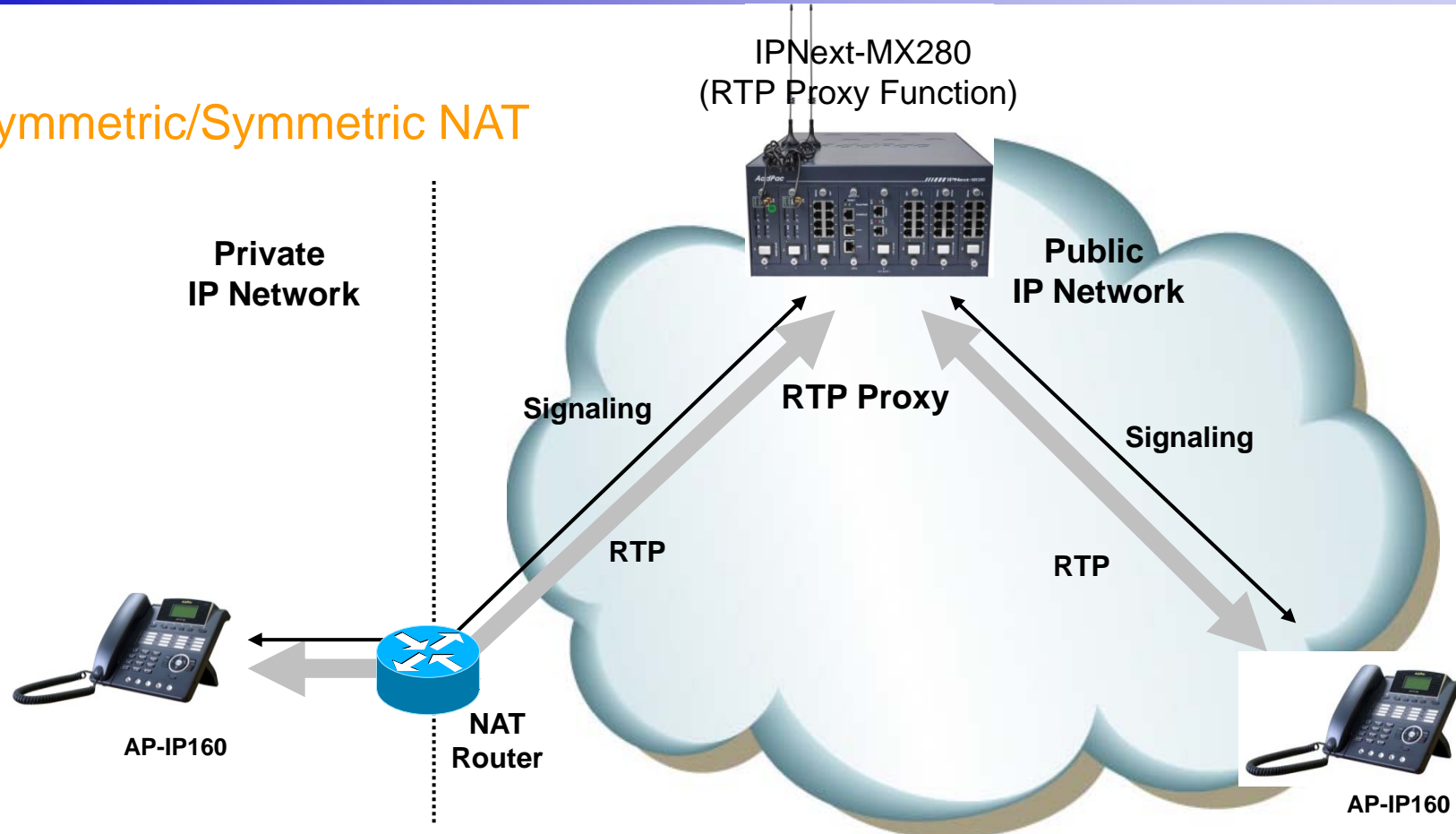


- Located between public and private network
- IPNext250(Call manager + RTP proxy) has public and private address
- IPNext250 determine that the call is internal or external

# RTP Proxy Service

IPNext-MX280 Mobile Hybrid IP-PBX System

## Asymmetric/Symmetric NAT

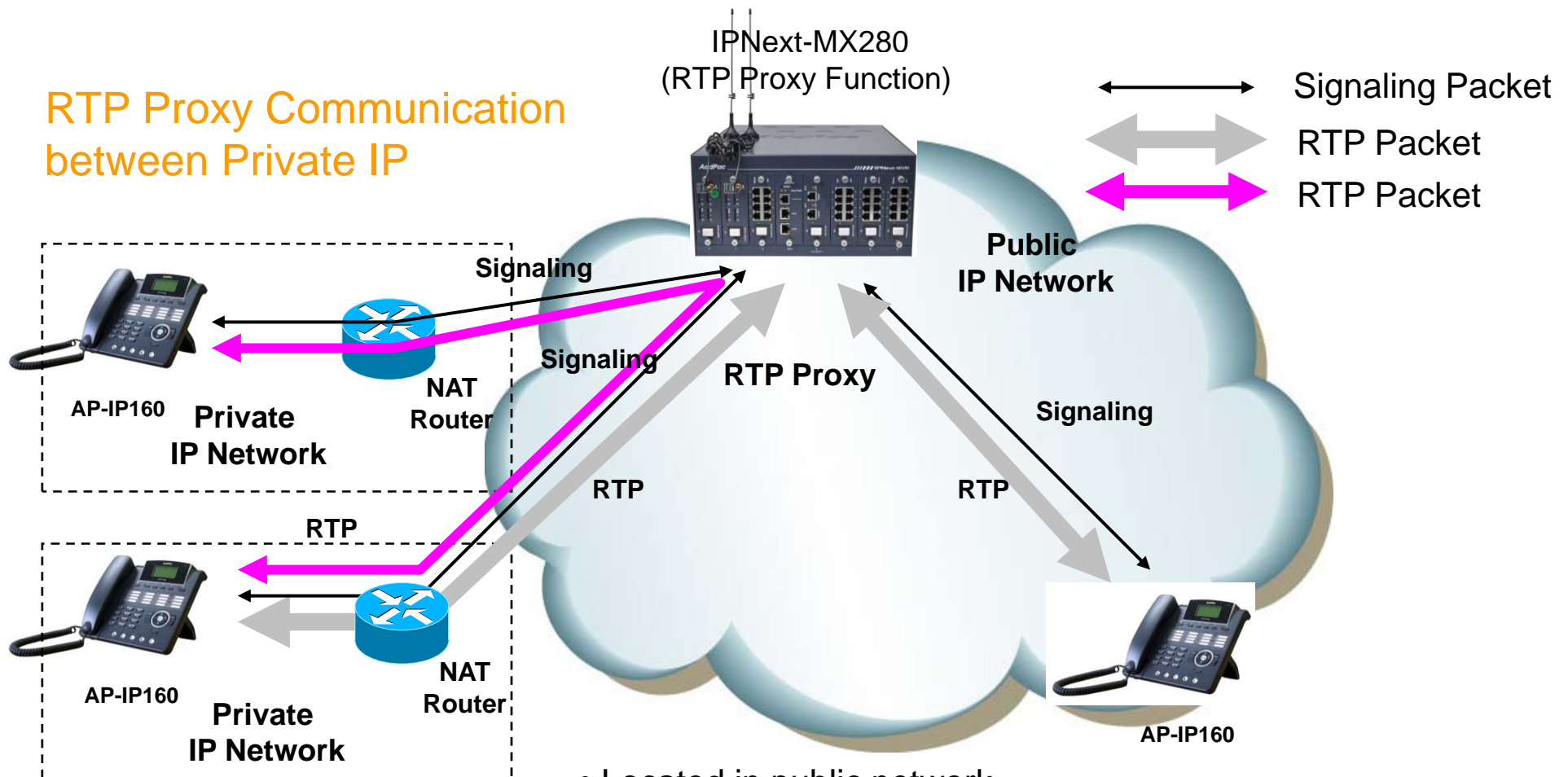


- Located in public network
- RTP Proxy has single public address
- Auto detect for asymmetric NAT via incoming RTP packet

# RTP Proxy Service

IPNext-MX280 Mobile Hybrid IP-PBX System

## RTP Proxy Communication between Private IP



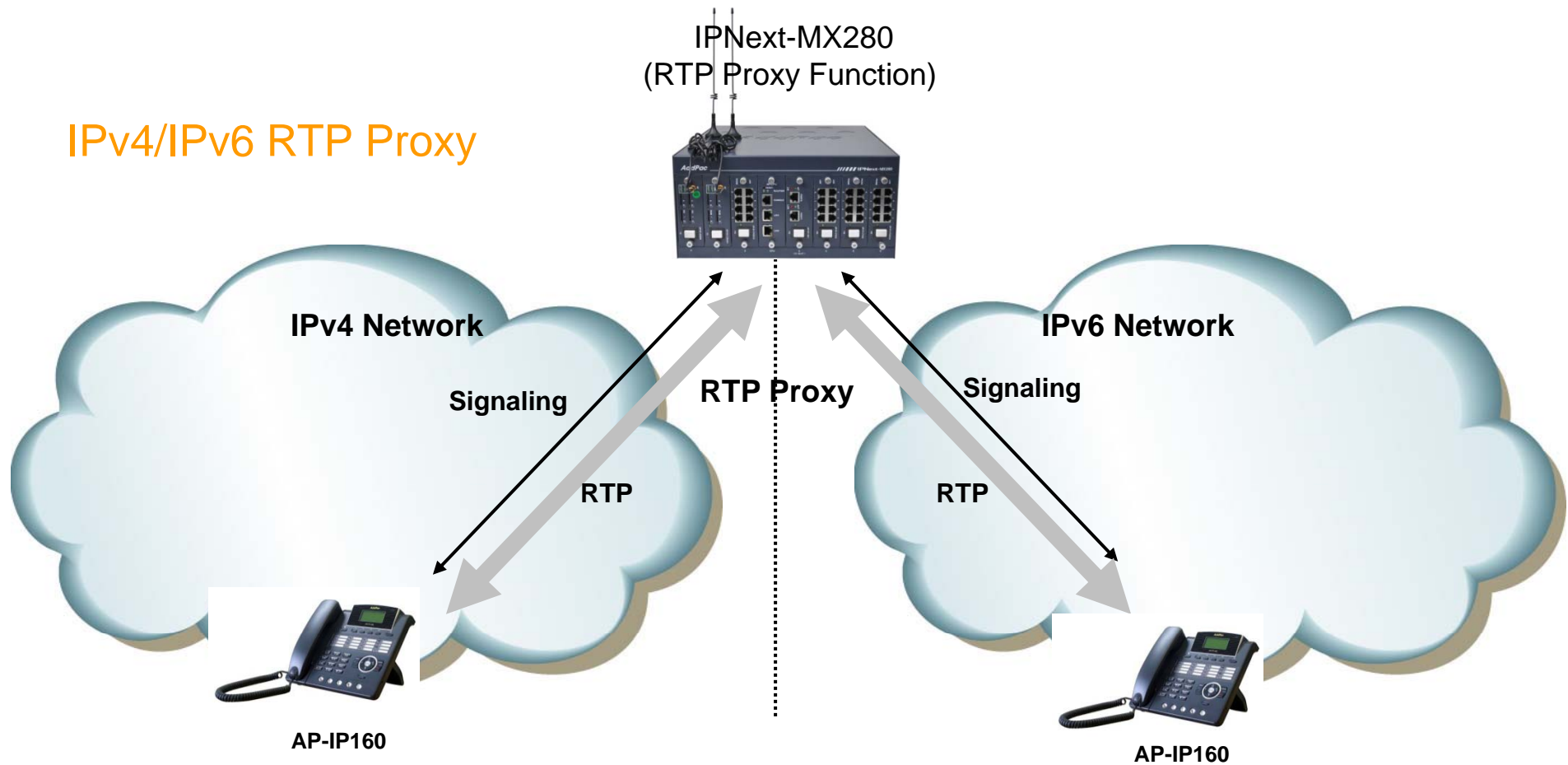
- Located in public network
- RTP Proxy has single public address
- Auto detect for asymmetric NAT via incoming RTP packet



# RTP Proxy Service

IPNext-MX280 Mobile Hybrid IP-PBX System

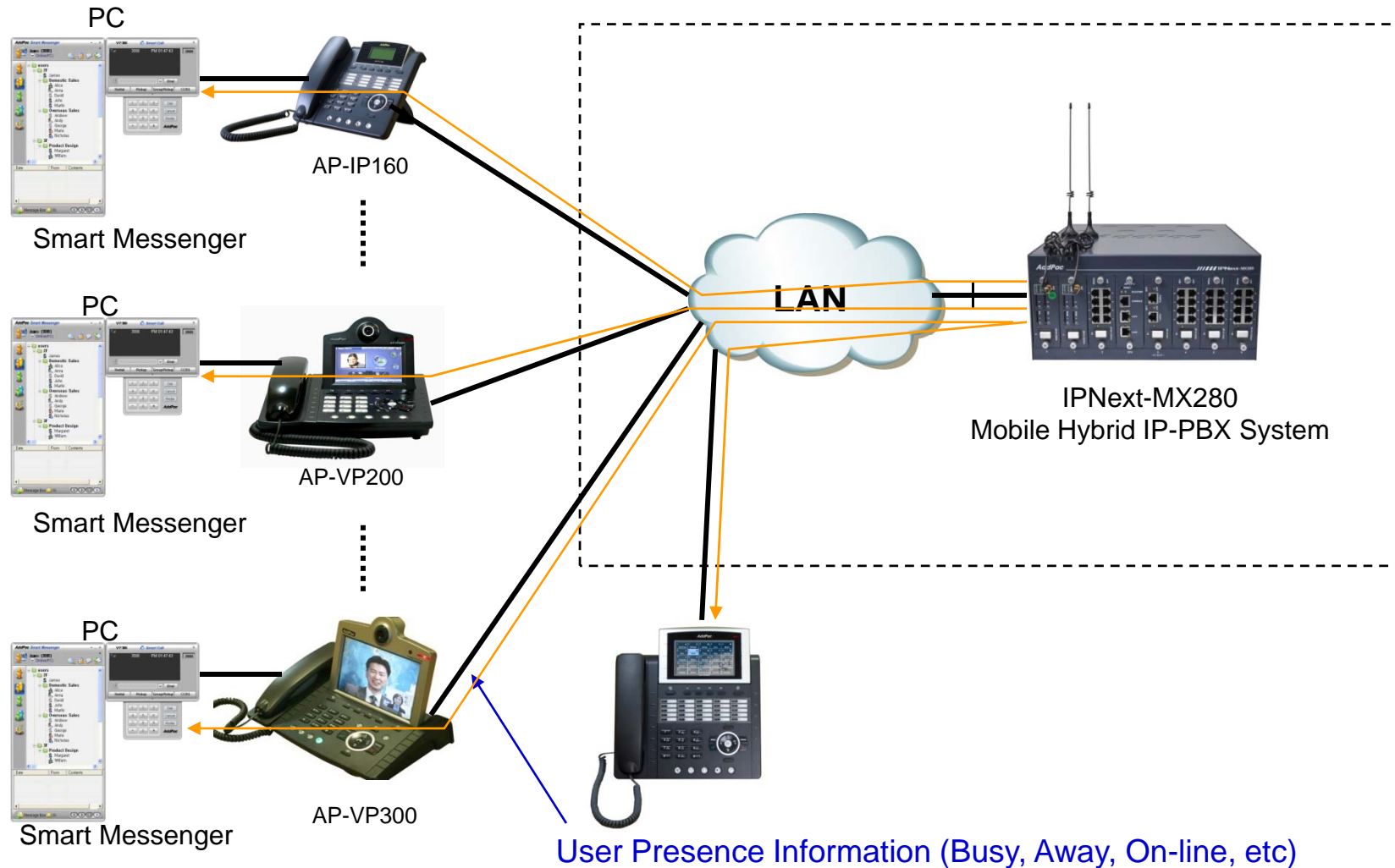
## IPv4/IPv6 RTP Proxy



- IPNext-MX280 (Call manager + RTP proxy) has IPv4 and IPv6 address

# User Presence Service for UC

## IPNext-MX280 Mobile Hybrid IP-PBX System



# Network Service and Features

IPNext-MX280 Mobile 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

IPNext-MX280 Mobile 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

IPNext-MX280 Mobile 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

IPNext-MX280 Mobile 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

# IP Video Phones

## IPNext-MX280 Mobile 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 Phones




## IPNext-MX280 Mobile 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



# IP Extend Key Terminals

## IPNext-MX280 Mobile Hybrid IP-PBX System

Model	AP-PT100	AP-PT50	AP-PT20
Service Features			
Key Type	7 inch LCD Touch Screen	Push Button with User Presence Indication LAMP	Push Button with User Presence Indication LAMP
Key Number	Default : 9(row) x 4(column) = 36	60 Key	40 Key
User Presence Indication	Support	LED on, LED off, LED Blink	LED on, LED off, LED Blink
Multiple Cascading	Support	Support	Support
Speaker	Support	Support	Support
LAN Port	2	2	2
PoE(Optional)	Support	Support	Support
Application	IP Phone or Video Phone Extend Key Pack	IP Phone or Video Phone Extend Key Pack	IP Phone or Video Phone Extend Key Pack

# IP Wifi Phone

IPNext-MX280 Mobile Hybrid IP-PBX System

- Wi-Fi IP Phone Solution
- Various Call Scenario Support (IP-PBX)
- State-of-art SIP Signaling
- IEEE802.11b/g up to 54Mbps
- WPA(Wifi Protected Access), 802.11i Security Standard
- Wi-Fi IP Audio Broadcasting Terminal Solution
- External Audio In/Out Port for Headset
- Firmware Upgradeable Architecture
- VoIP Solution with Outstanding Network Service Capability
- Audio Privacy Protection



# Smart Messenger for UC

IPNext-MX280 Mobile Hybrid IP-PBX System

- **Smart Messenger Program**

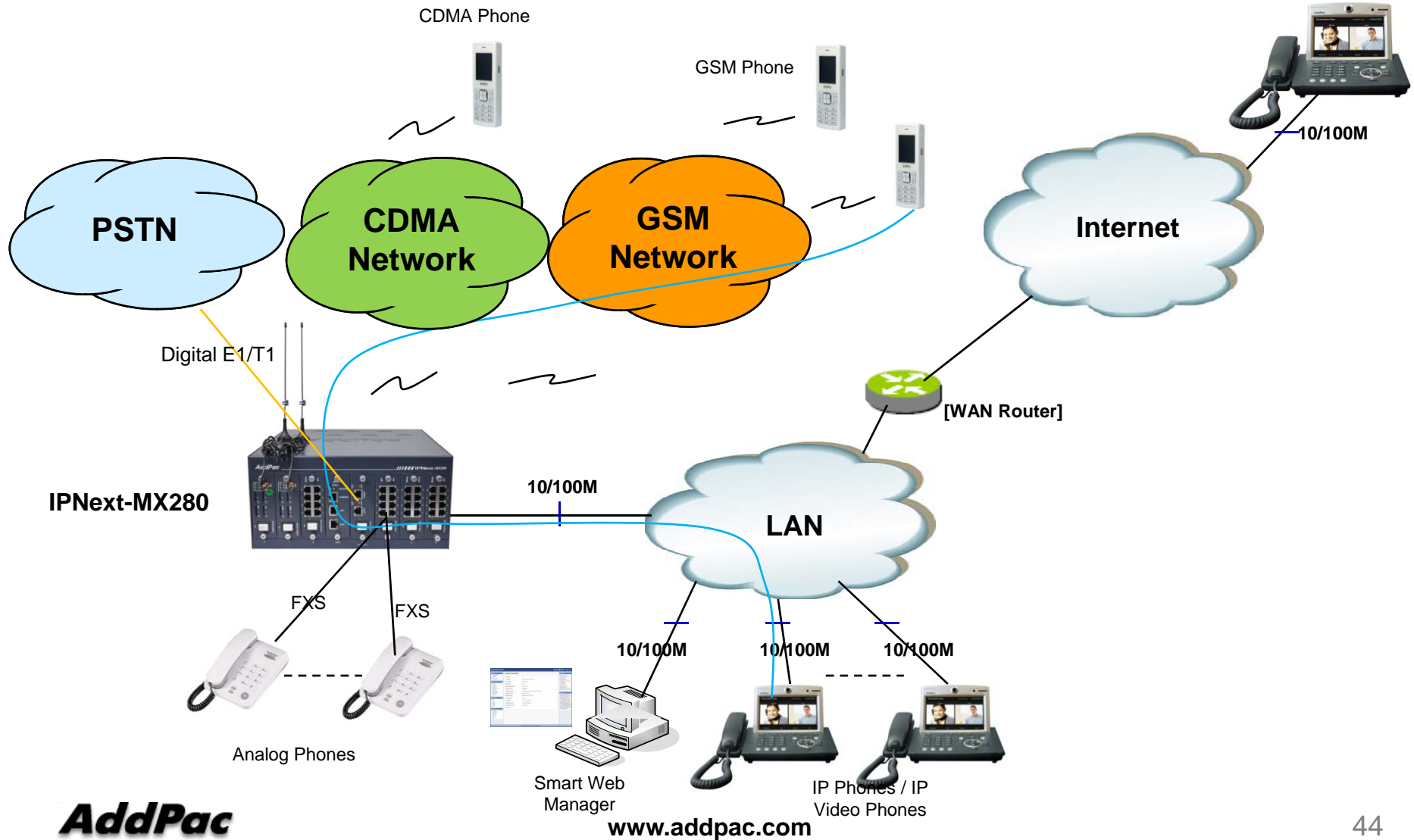
- PC based MS-Window Program
- Support Messenger Service
- Support Various Address Book
- Support User Presence Information (Busy, Away, On-line, etc)
- Support User Search Feature
- Interoperation with Address Book and Smart Phone
- Support Smart Phone Control and Setup
  - Call Control and Forward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



**Smart Messenger**

# Standard Mobile Hybrid IP-PBX Application

IPNext-MX280 Mobile Hybrid IP-PBX System



# Ordering Information

- **IPNext-MX280 Mobile Hybrid IP-PBX System**
  - IPNext-MX280 Mobile Hybrid IP-PBX System Main Body
  - High-performance RISC CPU
  - Seven(7) VoIP Interface Module Slots
  - 2-ports 10/100Mbps Fast Ethernet and 1-port RS-232C Console
  - Including Network Cable Set & Power Supply Cable, Antenna, etc.
  - PSTN Interface Modules (Option)
    - : AP-N1-FXS8, AP-N1-FXO8, AP-N1-E1, AP-N1-2E1, etc
  - Mobile Network Interface Modules (Option)
    - : AP-N1-GSM4, AP-N1-CDMA4, AP-N1-3G4, etc
- **Built-in APOS Internetworking Software for IPNext-MX280**
- **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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