

AP1605

SIP Audio Broadcasting Terminal

High Performance SIP Audio Broadcasting Terminal



AP1605 SIP Audio Broadcasting Terminal

AddPac

AddPac Technology

Sales and Marketing

www.addpac.com

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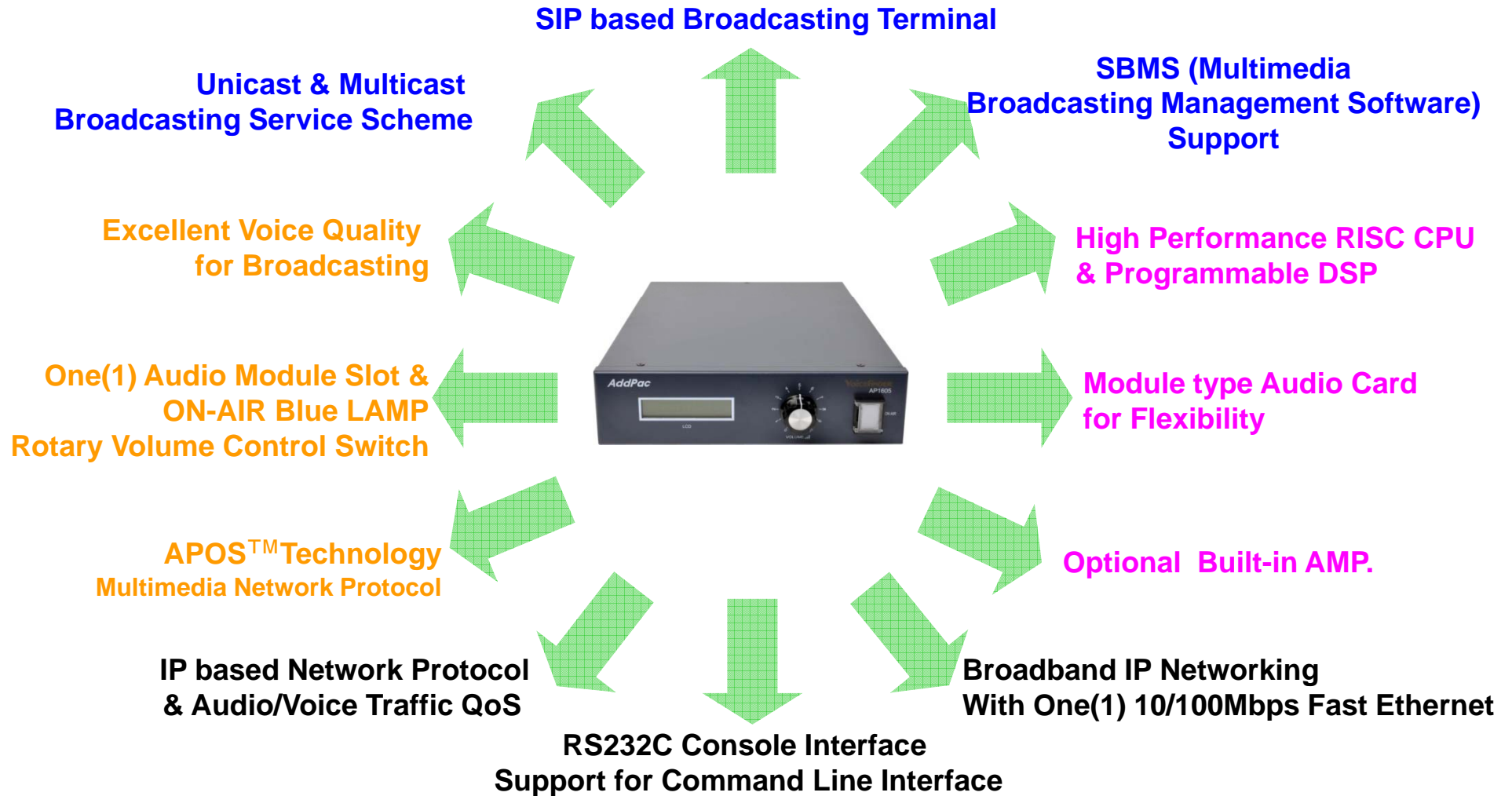
Product Overview

AP1605 SIP Audio Broadcasting Terminal

- SIP Protocol based Audio Broadcasting Terminal Solution
- RTP (Real-time Transport Protocol) Support for Media Transmission
- IP based Audio Broadcasting Terminal Solution (AddPac Proprietary Protocol)
- Hardware Architecture for Audio Broadcasting Terminal Service
- One(1) Module Slot for Audio Encoding & Decoding Service
- Remote Broadcasting Service at terminal side
- High Quality Audio Codec Support (High Quality Codec, G.711, G.726, etc)
- Unicast and Multicast Broadcasting Scheme
- SPMS (SIP Paging Management Software) Support
- **Optional Built-In Digital AMP.**
- On-AIR Blue LAMP
- **Volume Control Rotary Switch at front panel**
- High-Quality Audio/Voice Service
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

Product Highlights

AP1605 SIP Audio Broadcasting Terminal



Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

- RISC Microprocessor Computing Power
- High-end Programmable DSP Hardware Architecture
- One(1) Module Slot for Audio Broadcasting Codec Module
- High Quality Audio Encoding/Decoding Service
- ON-AIR Blue LAMP
- Rotary Volume Control Switch
- Option Module : AP-N3-HQA1000
 - One(1) 10/100Mbps Fast Ethernet (RJ45)
 - One(1) RS-232C Interface (RJ45) for Command Line Interface
 - Stereo Audio Input/Output Connector
- Option Module : AP-N3-HQA1000A
 - One(1) 10/100Mbps Fast Ethernet (RJ45)
 - One(1) RS-232C Interface (RJ45) for Command Line Interface
 - Stereo Audio Input/Output Connector
 - Built-in Audio AMP.

Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1605 Front Side



Status LCD

Rotary Volume
Control Switch

On-Air Blue LAMP

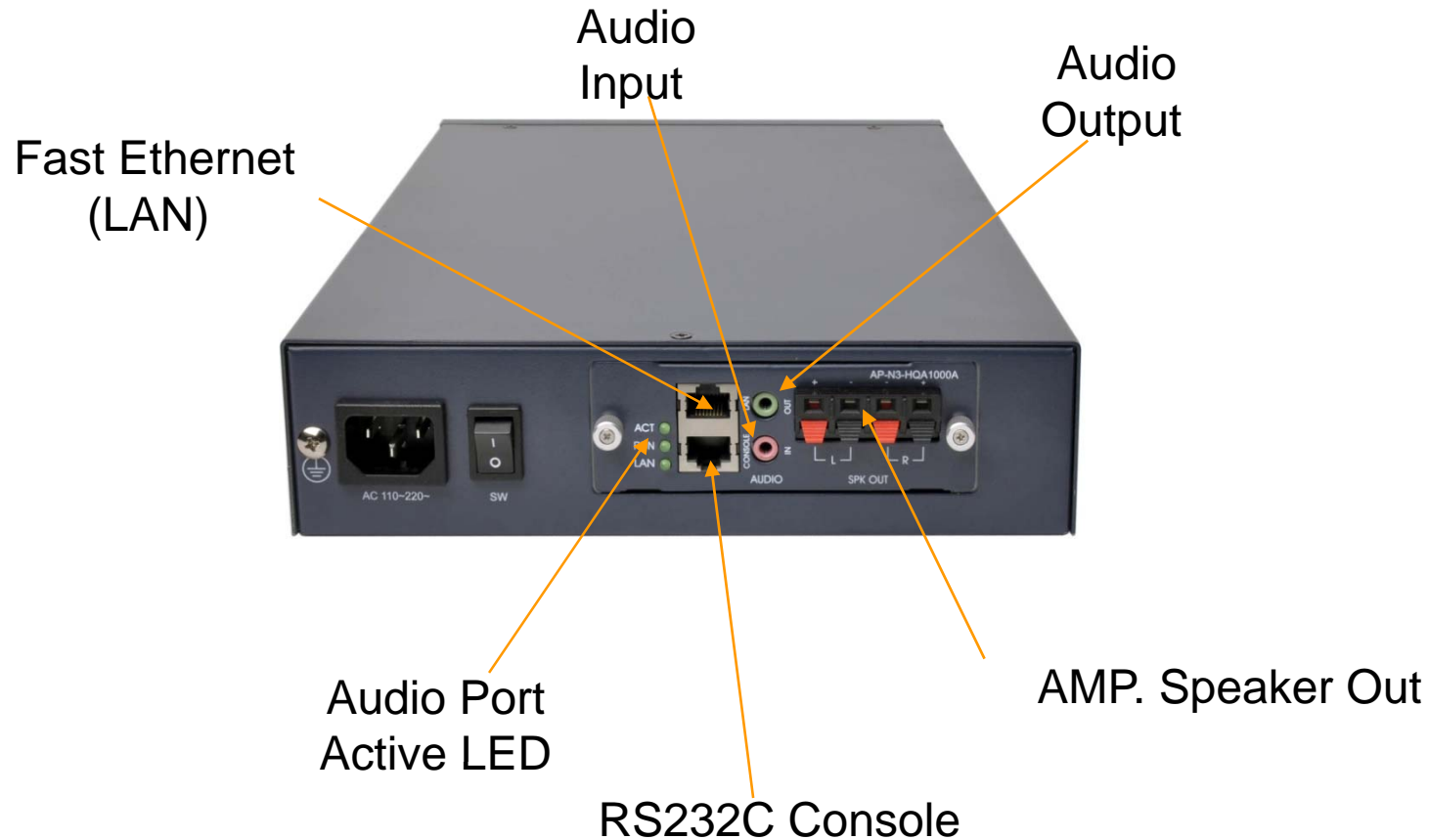
Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1605 Back Side



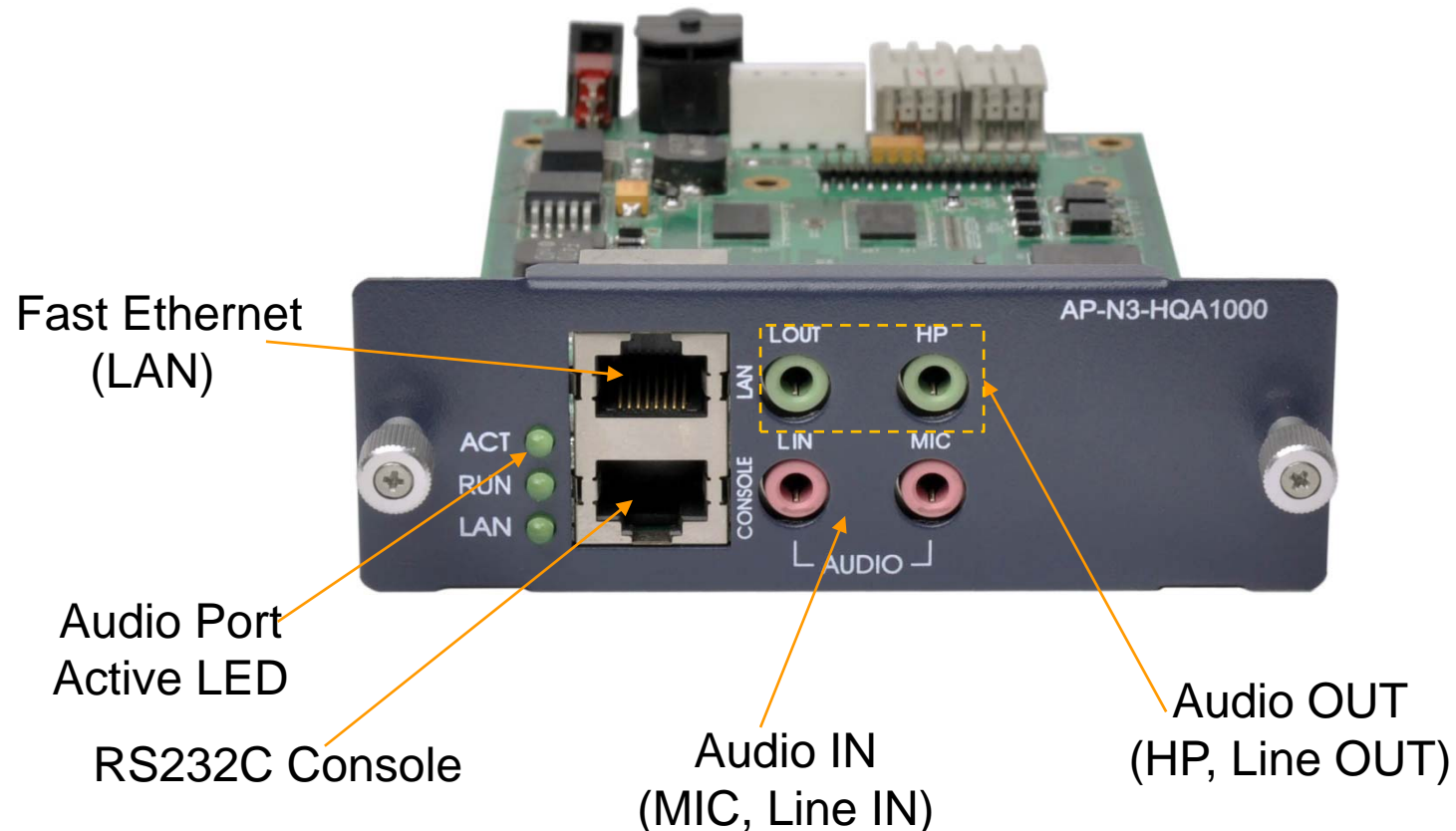
Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

AP-N3-HQA1000 Board



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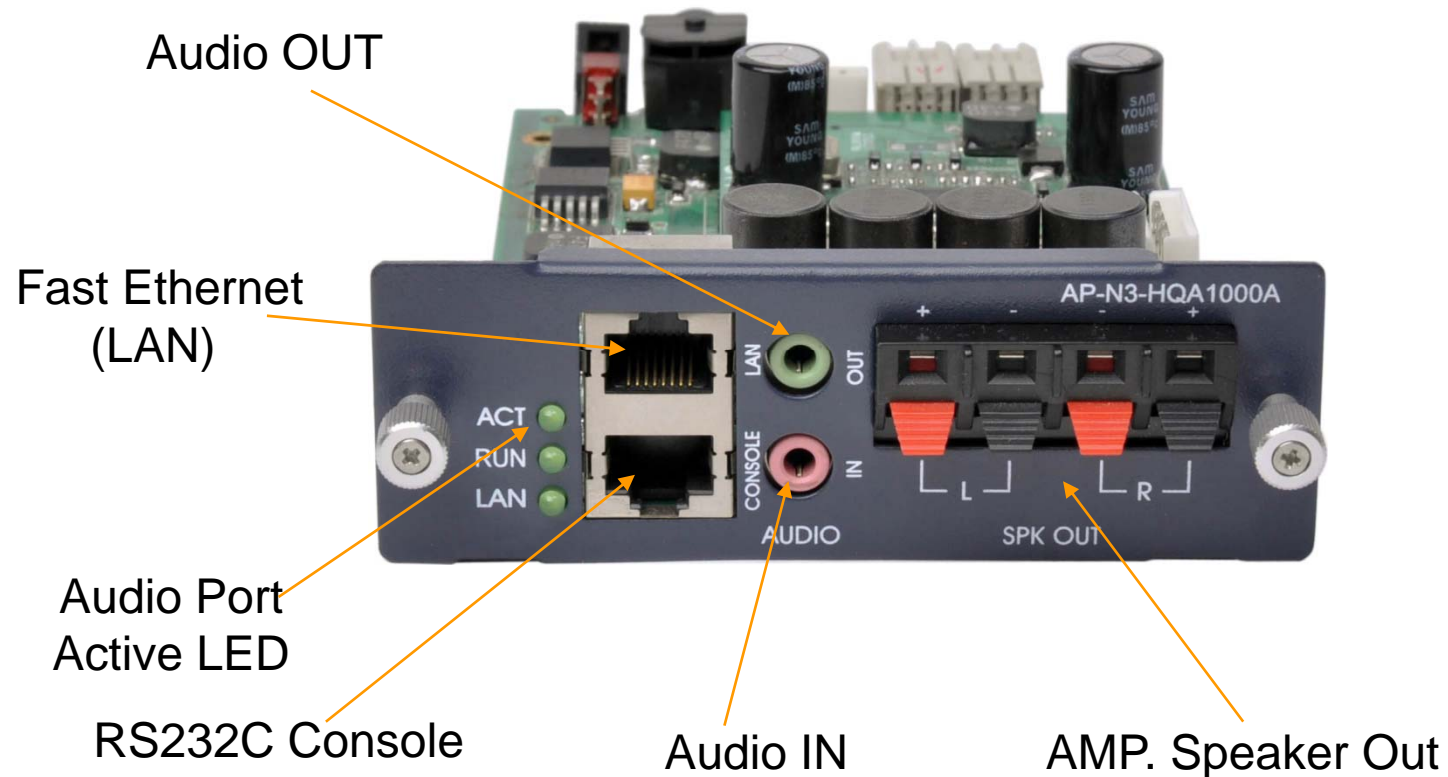
Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

AP-N3-HQA1000A Board



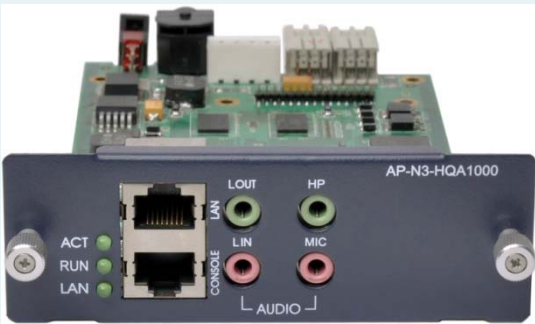
Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1605 Audio Module

Audio Module Type	Audio Module Features
<p data-bbox="562 703 893 743">AP-N1-HQA1000</p>  <p>The image shows a dark grey audio module with a green PCB. On the front panel, there are three status LEDs labeled ACT, RUN, and LAN. To the right of the LEDs are a LAN port, a console port, and an audio jack labeled 'AUDIO'. Further right are two pairs of ports: LOUT and HP (green), and LIN and MIC (red). The model number 'AP-N3-HQA1000' is printed on the top right of the front panel.</p>	<ul style="list-style-type: none"><li data-bbox="1178 699 1742 738">One(1)-Channel Audio In/Out Port<li data-bbox="1178 762 1608 802">One(1) Fast Ethernet Port<li data-bbox="1178 826 1525 866">One(1) RS232C Port<li data-bbox="1178 890 1742 930">Audio Encoding/Decoding Service<li data-bbox="1178 954 1559 994">Audio IN : MIC, Line IN<li data-bbox="1178 1010 1765 1050">Audio OUT : Headphone, Line OUT<li data-bbox="1178 1066 1518 1106">3.5mm Stereo JACK<li data-bbox="1178 1145 1843 1185">High Quality Codec, G.711 Audio Codec

Hardware Specification

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1605 Audio Module

Audio Module Type	Audio Module Features
AP-N1-HQA1000A	One(1)-Channel Audio In/Out Port
	One(1) Fast Ethernet Port
	One(1) RS232C Port
	Audio Encoding/Decoding Service
	Audio IN
	Audio OUT
	AMP. Built-in Speaker Out (Left, Right)
	4ohm Speaker : 50Watt
	8ohm Speaker : 30Watt
	High Quality Codec, G.711 Audio Codec

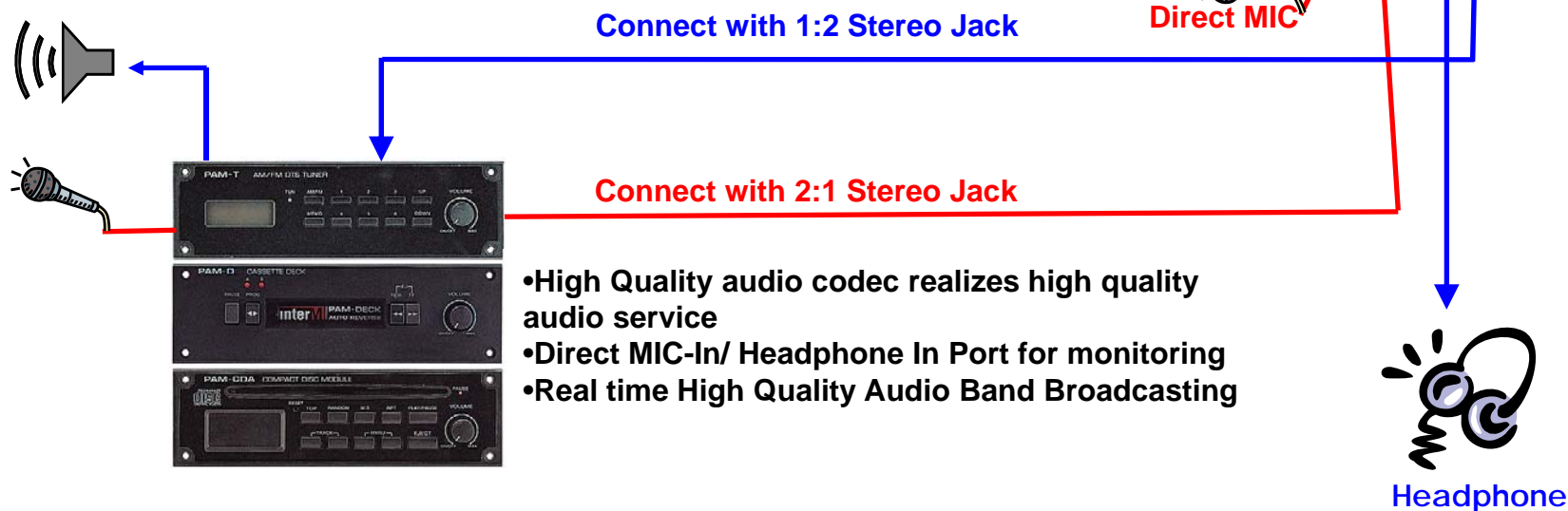
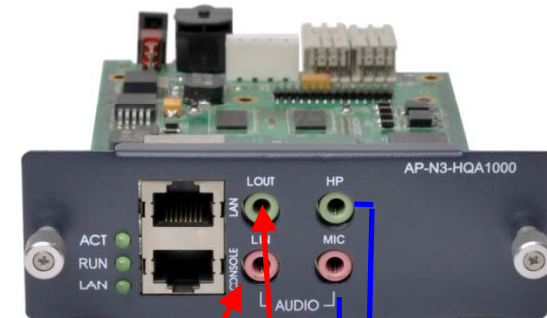


AP-N3-HQ1000 Module

AP1605 SIP Audio Broadcasting Terminal

RISC
CPU

High-end
DSP



AddPac

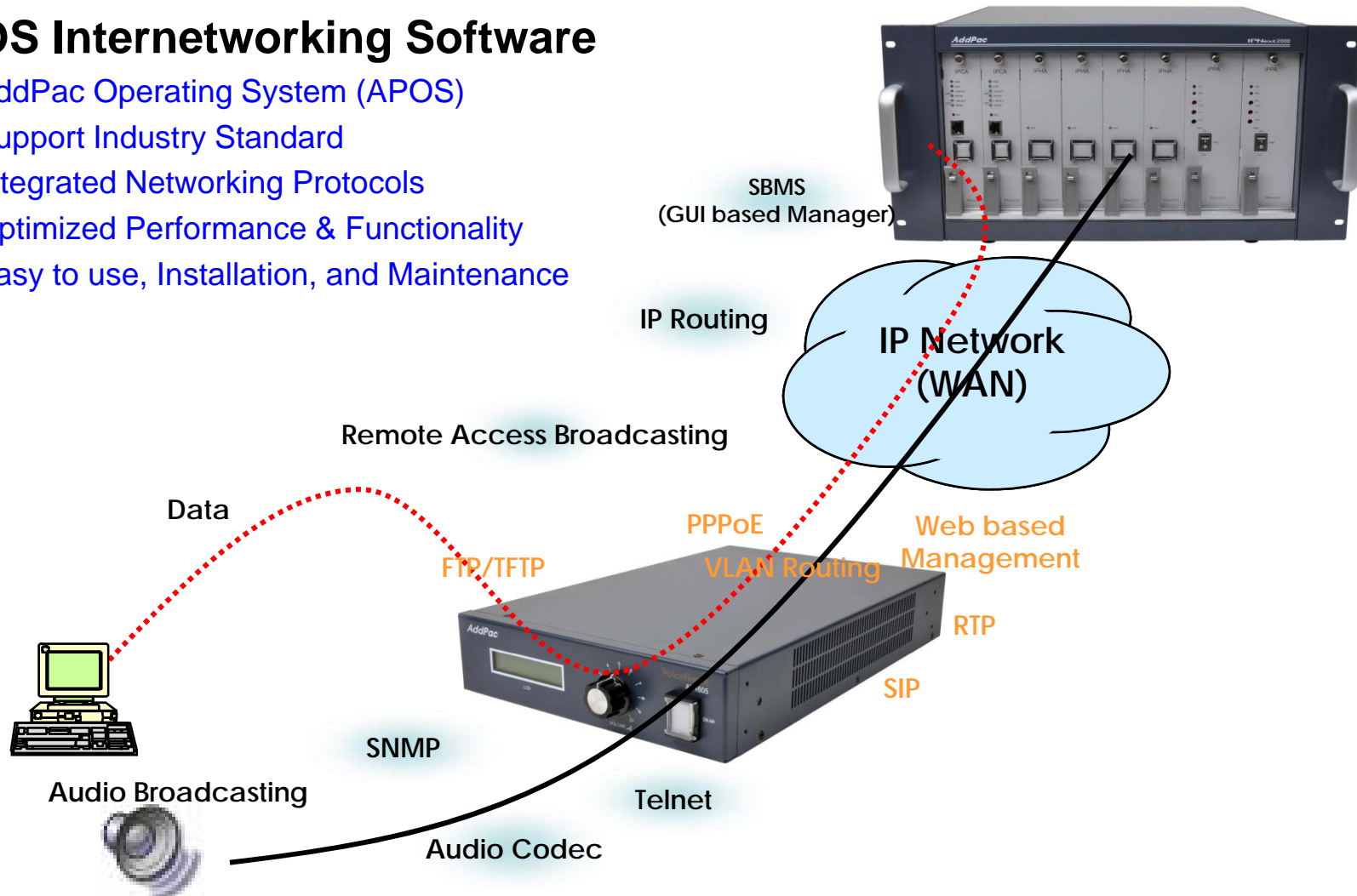
www.addpac.com

APOS™ Service Features

AP1605 SIP Audio Broadcasting Terminal

- **APOS Internetworking Software**

- AddPac Operating System (APOS)
- Support Industry Standard
- Integrated Networking Protocols
- Optimized Performance & Functionality
- Easy to use, Installation, and Maintenance



APOS™ Service Features

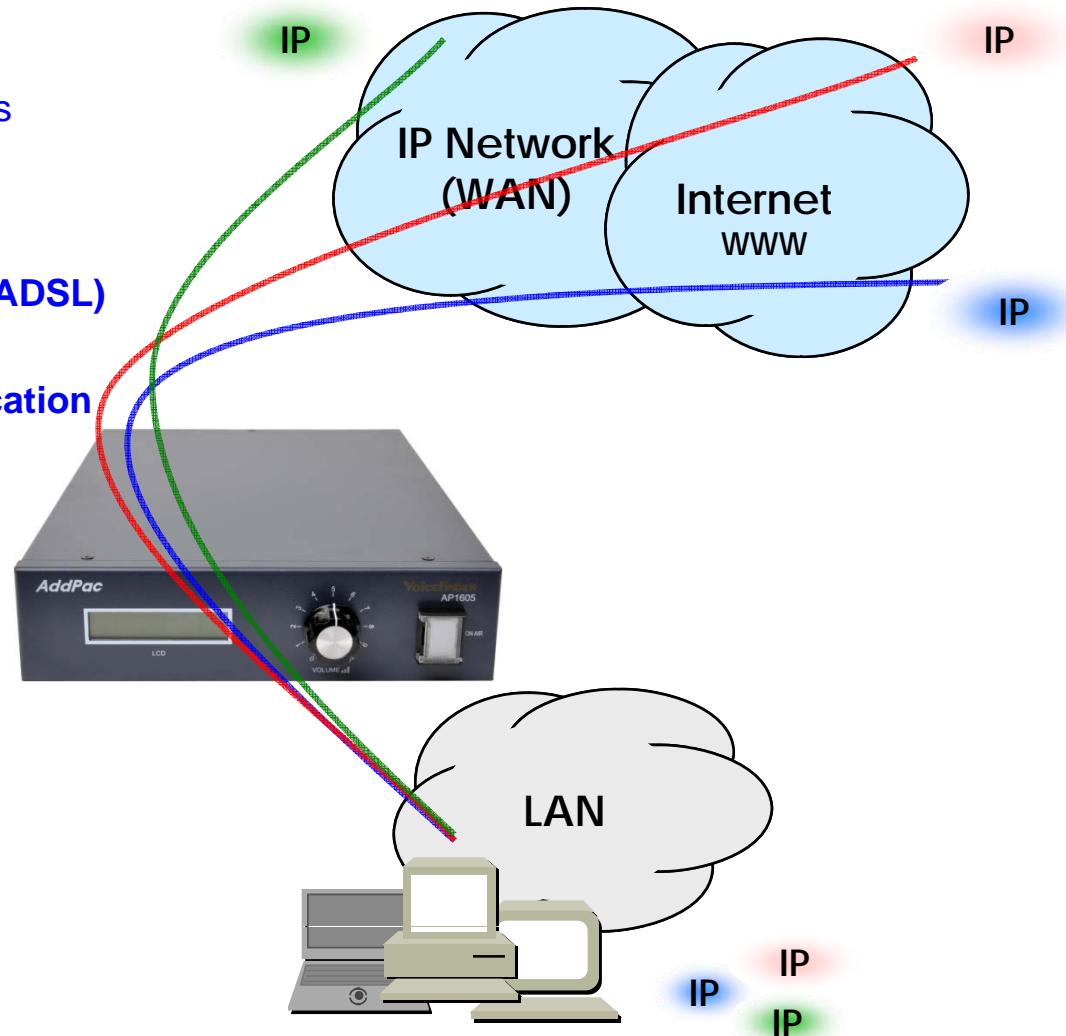
AP1605 SIP Audio Broadcasting Terminal

- **IP Routing Protocols**

- Multi-protocol Internetworking Services
- Static & Default IP routing

- **WAN Protocols**

- Point-to-Point Protocol (PPPoE for ADSL)
- IEEE 802.3 Ethernet
- PPTP support for secure communication



APOS™ Service Features

AP1605 SIP Audio Broadcasting Terminal

- **Network Managements**
 - Standard SNMP Agent (MIB v2) Support
 - Remote Management using Console, Telnet
 - Web based Management using HTTP Server Interface
- **Security Functions**
 - Standard & Extended IP Access List
 - Enable/Disable for Specific Network Protocols
 - Multi-level User Account Management
 - Auto-disconnect for Telnet/Console Sessions
 - PPP User Authentication Supports (PAP & CHAP)
- **Operation & Managements**
 - System Performance Analysis for Process, CPU, Connection Interface
 - Debugging, System Auditing, and Diagnostics Support
 - System Booting and Auto-rebooting with Watchdog Feature
 - System Managements with Data Logging
 - IP Traffic Statistics with Accounting

APOS™ Service Features

AP1605 SIP Audio Broadcasting Terminal

- **Network Protocols**
 - DHCP Server & Relay Functions
 - Network Address Translation (NAT) Function
 - Port Address Translation (PAT) Function
 - Transparent Bridging (IEEE Standard) Function
 - Spanning Tree Bridging Protocol Support
 - Remote Bridging Support
 - Concurrent Routing and Bridging Support
 - Cisco Style Command Line Interface (CLI)
 - Network time Protocol (NTP) Support

VoIP Service Features

AP1605 SIP Audio Broadcasting Terminal

- SIP Protocol Service
 - Gateway-based / Endpoint-based registration support
 - Secondary proxy-server assignment function
 - SIP signaling port change function
 - SIP proxy server assignment according to the domain name
 - T.38 real-time fax relay support
 - DTMF relay support with RFC2833 / OPTION message
 - Re-INVITE support

VoIP Service Features

AP1605 SIP Audio Broadcasting Terminal

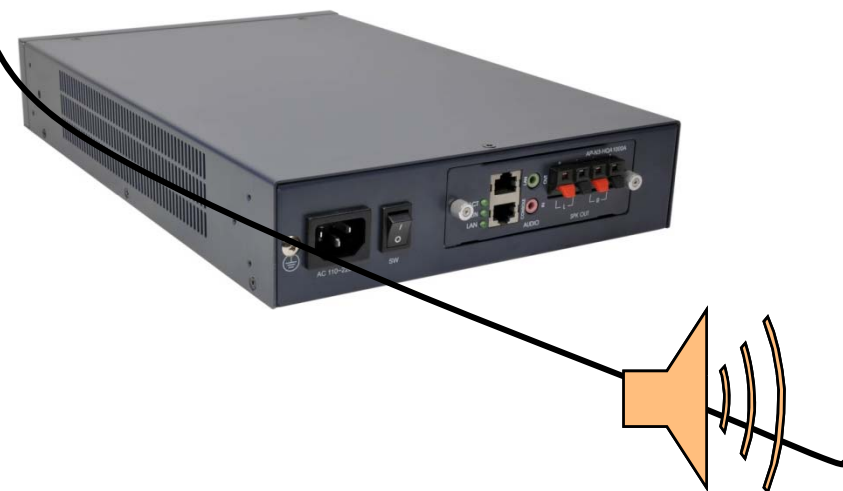
- Audio Codec for AP-HQA Module

- High Quality Audio Codec
- G.711, G.726 Audio Codec

IP Broadcasting

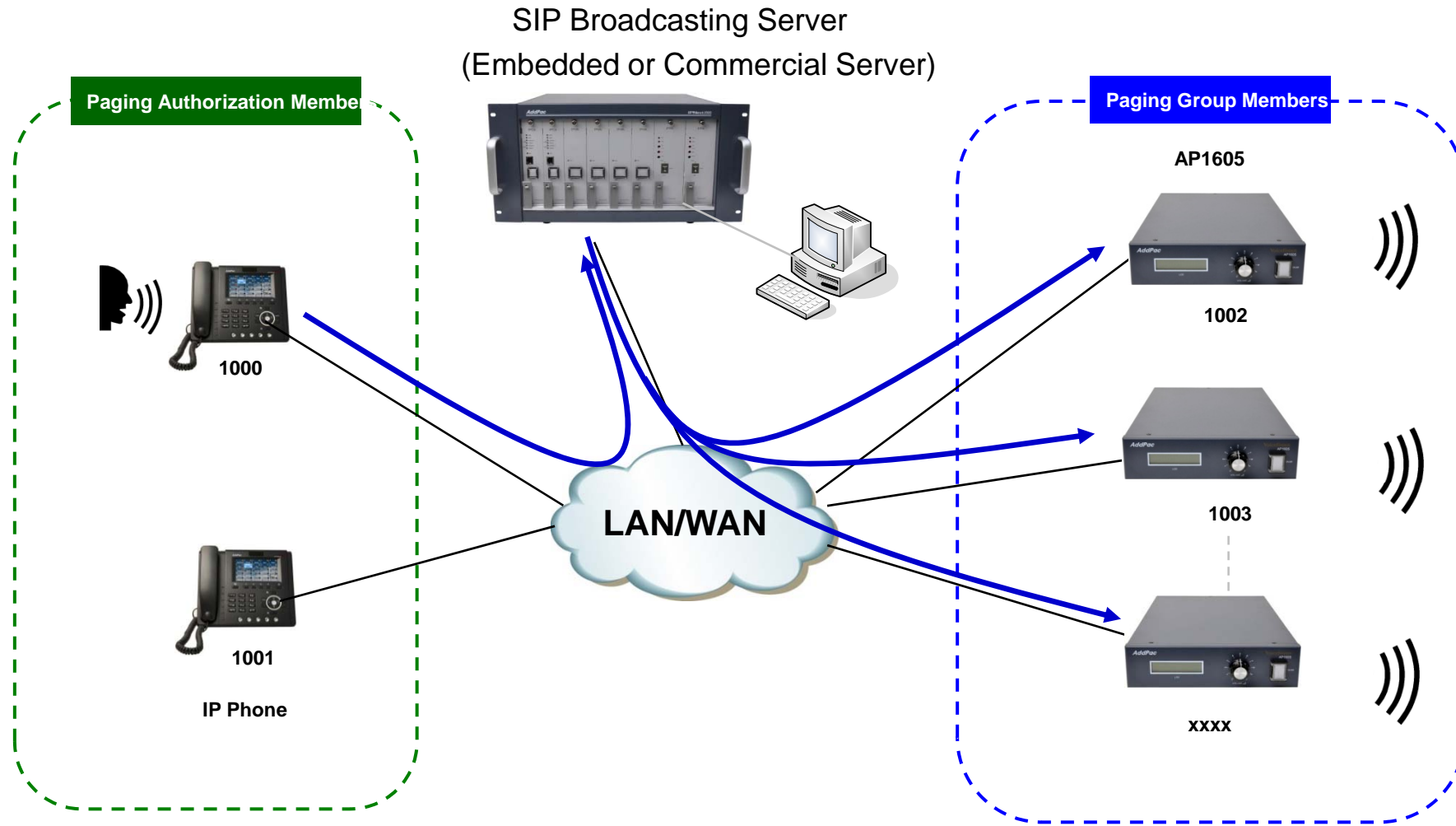
- RTP Protocols

- Redundant RTP packet transmission in case of severe packet loss
- Dynamic jitter buffer management and RTP packet jitter and loss compensation with heuristic & DSP error concealment
- Static jitter buffer setting support
- Voice frame per RTP packet number control for each codec



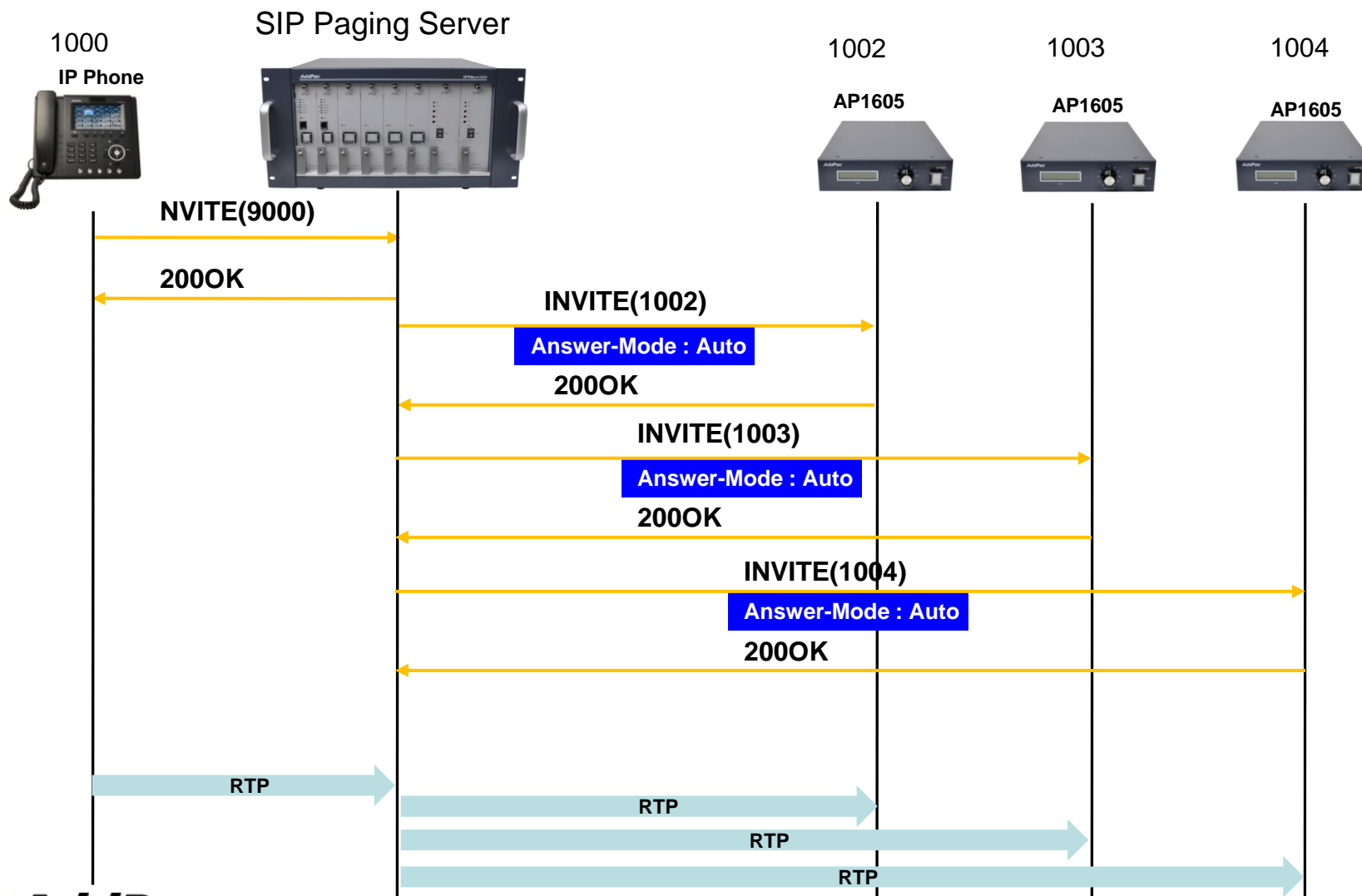
SIP Broadcasting Network Diagram

AP1605 SIP Audio Broadcasting Terminal



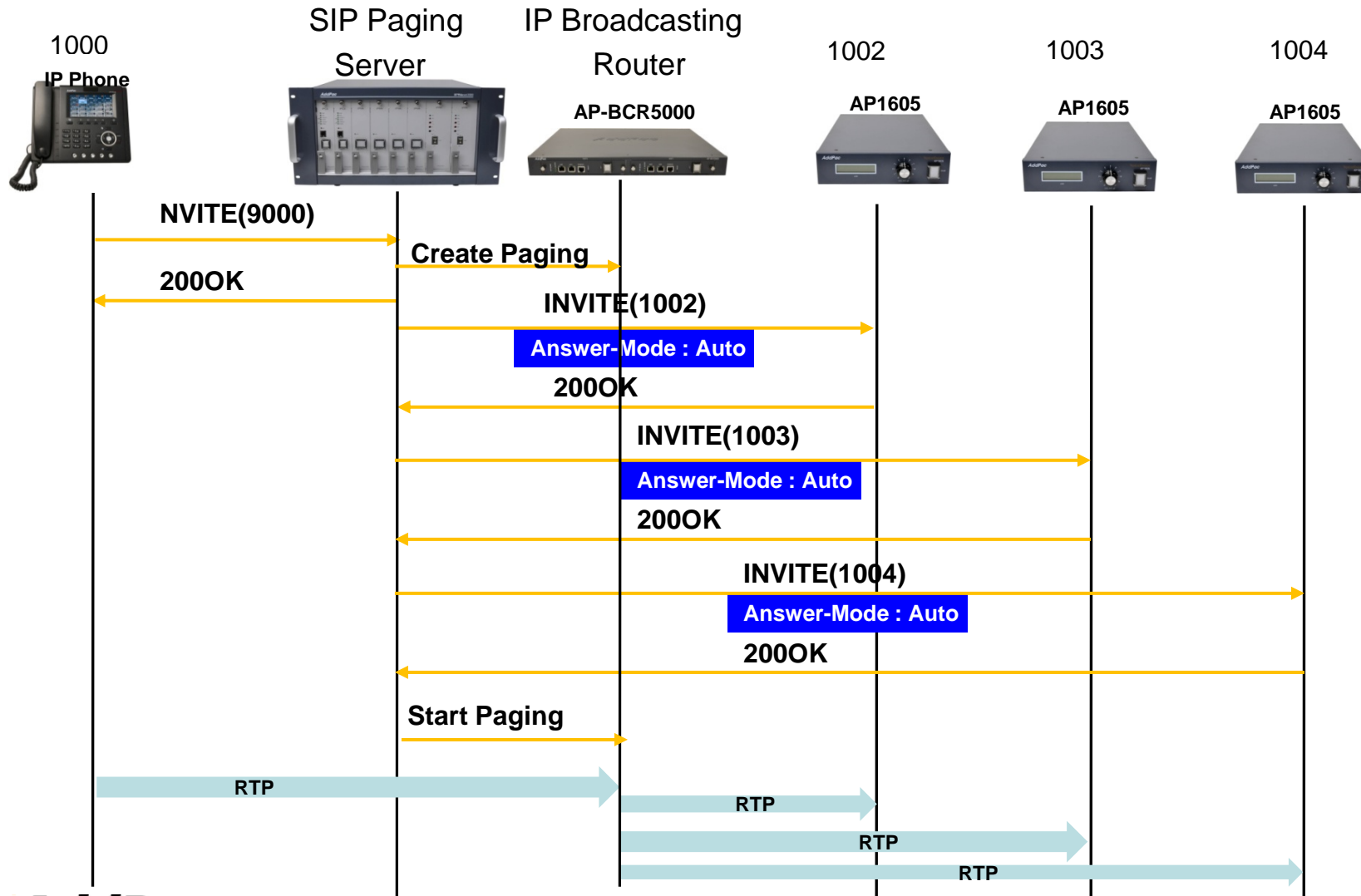
Paging Group Signaling Flow (Case 1)

AP1605 SIP Audio Broadcasting Terminal








Paging Group Signaling Flow (Case 2)

AP1605 SIP Audio Broadcasting Terminal



SIP Audio Broadcasting Solution

SIP Paging Management S/W	SIP Paging Server	IP Audio Broadcasting Router (Relay Server)	HQ Audio Broadcasting Terminal AP1605A
			
<p>Web based SIP Paging Management Software.</p>	<p>Commercial Server Platform (AP-SPS10000), Linux Embedded H/W Platform (AP-SPS2000) Embedded H/W Platform (AP-SPS600)</p>	<p>1:N Audio Broadcasting Router. Gigabit Ethernet Support</p>	<p>Embedded Hardware based Audio Terminal. Volume Control Rotary Switch. One(1) HQ Audio Codec Module. Built-in AMP. G.711 Audio Codec.</p>



WSMM Configuration for Paging Group

(WSMM : Web based Smart Multimedia Manager)

Extension – Paging Group

Smart Multimedia Manager
www.addpac.com

Extensions

Modify	Delete	User Portal	Extension Number	Type	Name	Date Created
1			1000	User Extension	Ashley Allen	2015-07-28 12:39:51
2			1001	User Extension	Mary Moore	2015-07-28 12:39:55
3			1002	User Extension	Thomas Taylor	2015-07-28 12:40:00
4			1003	User Extension	Victoria Valdez	2015-07-28 12:40:04
5			1004	User Extension	Olivia Ortiz	2015-07-28 12:40:08
6			1005	User Extension	Linda Lewis	2015-07-28 12:40:12
7			1006	User Extension	George Gale	2015-07-28 12:40:17
8			1007	User Extension	Isabel Irwin	2015-07-28 12:40:21
9			1008	User Extension	William Watson	2015-07-28 12:40:25
10			1009	User Extension	Sarah Scott	2015-07-28 12:40:30
11			1010	User Extension	Nicolas Nelson	2015-07-28 12:40:34
12			1011	User Extension	Emma Evans	2015-07-28 12:40:38
13			1012	User Extension	Rachel Ross	2015-07-28 12:40:43

Add a Paging Group

Add

Extension * (2~12 digits)

Name *

Audio Codec

Play beep at start

Play Announcement

Extensions

Extension	Name	Extension

Paging Group Members

Name	Extension	Display Name	Multicast

Paging Group

A paging group has members of user extensions who will receive broadcasting announcement with auto answering by speaker phone. This is half-duplex one-way broadcasting.

Attendant Queue

When a call is inbound from trunk or extensions to this queue member and handled by them. Currently, the queue member

Group Members

Callout Box:
Paging Group
 A paging group has members of user extensions who will receive broadcasting announcement with auto answering by speaker phone. This is half-duplex one-way broadcasting.

Paging Group Configuration

Smart Multimedia Manager
www.addpac.com

Add a Paging Group

Extension * 9000 (2~12 digits) Check Extension Extension number is valid.

Name *

Audio Codec G.711U

Play beep at start Beep Sound 3

Play Announcement

Group Members

Name	Extension
Ashley Allen	1000
Mary Moore	1001
Isabel Irwin	1007
William Watson	1008
Sarah Scott	1009
Nicolas Nelson	1010
Emma Evans	1011
Debra Depp	1012

Paging Group Members

Name	Extension	Display Name	Multicast
Thomas Taylor	1002		Off
Victoria Valdez	1003		Off
Olivia Ortiz	1004		Off
Linda Lewis	1005		Off
George Gale	1006		Off

Authorization Members

Name	Extension	Display Name	Multicast
Ashley Allen	1000		Off
Mary Moore	1001		Off

Description

A paging group has members of user extensions who will receive broadcasting announcement with auto answering by speaker phone. This is half-duplex one-way broadcasting. Only authorized members can make a paging by dialing the paging extension.

Play Announcement

Play Announcement

Announcement Closing Notification

Repeat Count 1

Retry Count 2

Retry Interval 3 sec

Close on Caller Drop Call

Related Links

- User Extension
- Announcement and Tones
- Partitions

Paging Extension
This is paging extension number to make the paging by dialing digits.

Group Members
These members can receive broadcasting announcement.

Play Announcement
If enabled, group members will hear announcement at broadcasting. The announcement can be selected among announcement files and can be uploaded at Announcements and Tones menu.

Authorization Members
Only these authorized member can start this paging by dialing the paging extension digits.

Ordering Information

- **AP1605 SIP Audio Broadcasting Terminal Hardware**
 - AP1605 Main Body
 - RISC Microprocessor with High-end Programmable DSP Architecture
 - Option : AP-N3-HQA1000 Module , AP-N3-HQA1000A Module
 - Including Network Cable Set & Power Supply, etc.
- **Built-in APOS Internetworking Software for AP1605**
- **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



Thank you!

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