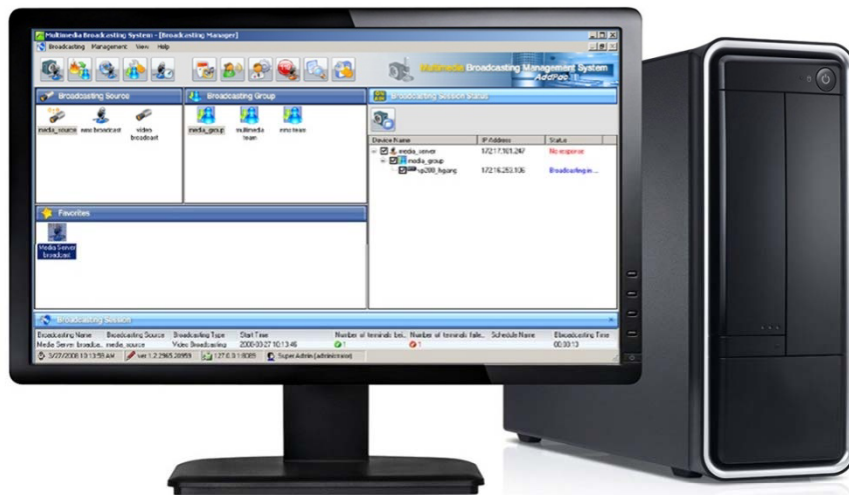




# AP-WBS

Window based IP Broadcasting Server

Primary-Secondary IP Broadcasting



**AddPac**

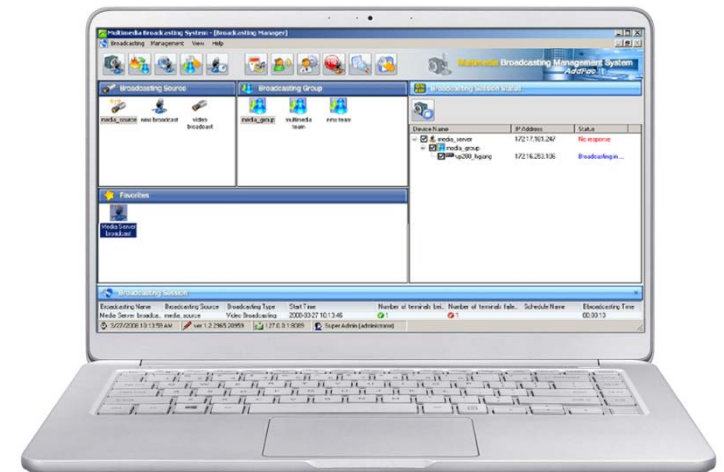
**AddPac Technology**

Sales and Marketing

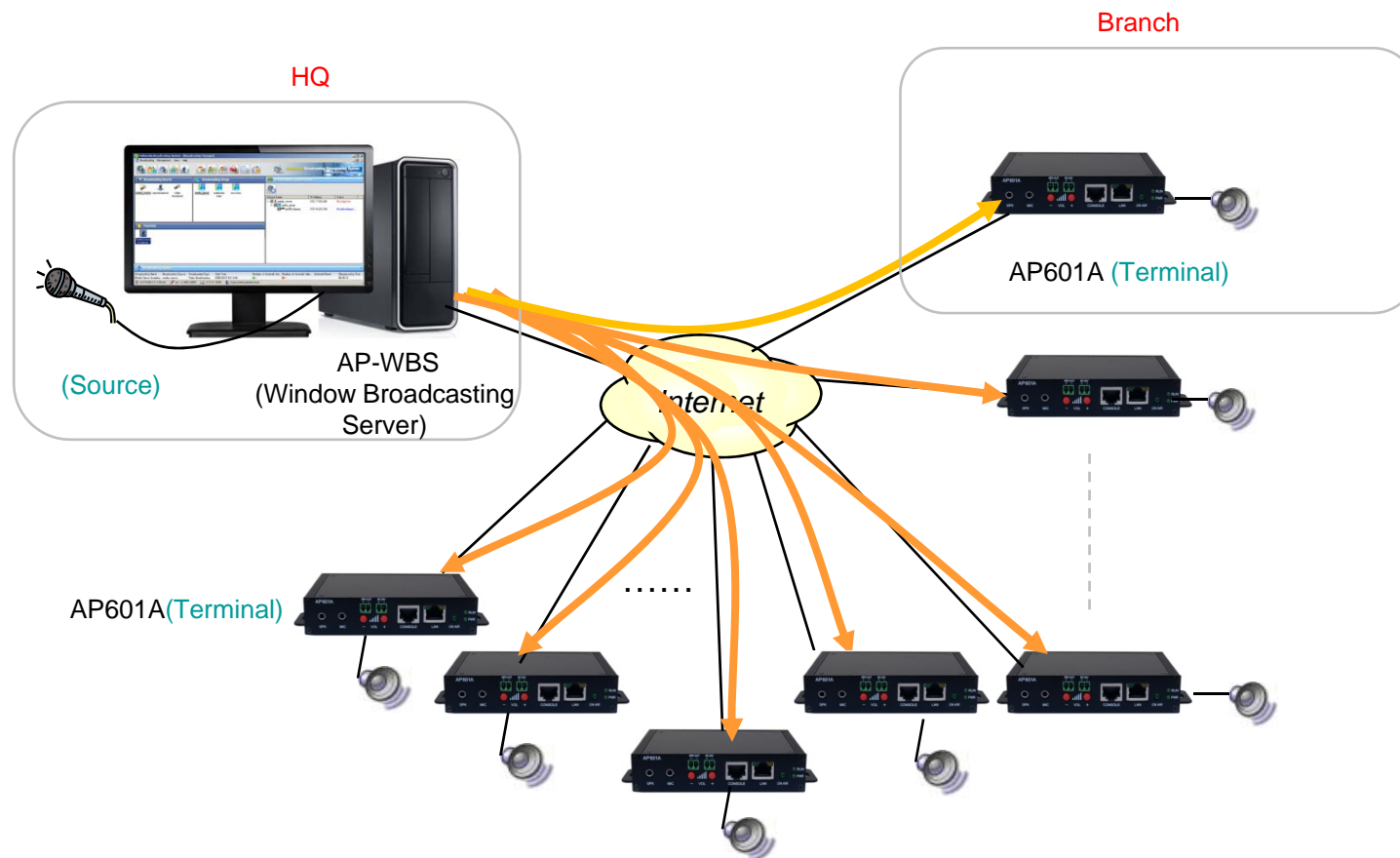
[www.addpac.com](http://www.addpac.com)

# Contents

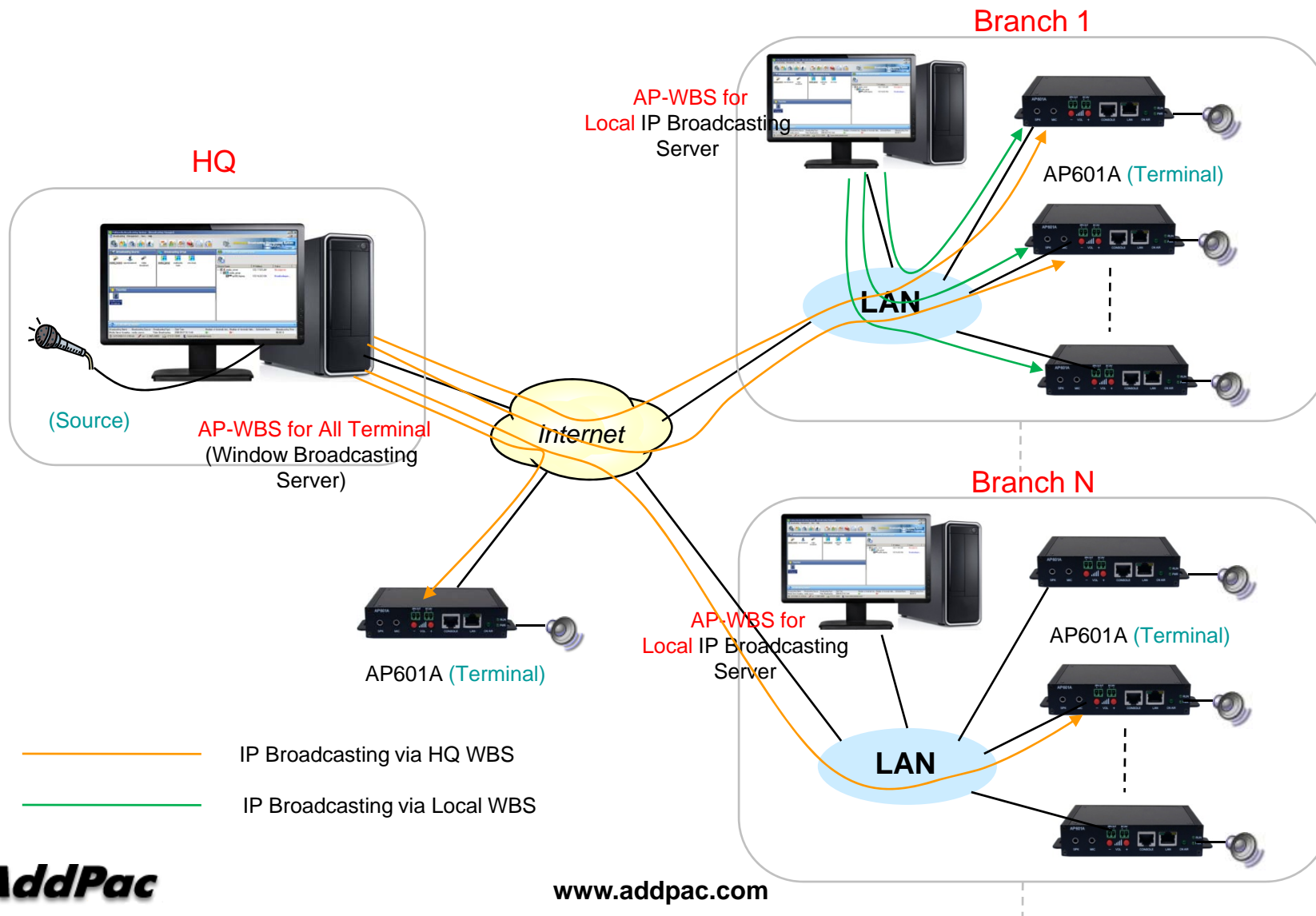
- Network Diagram
  - General IP Broadcasting Service
  - HQ-Branch Primary Secondary IP Broadcasting Service
- Signal Flow Diagram
- WBS Product Overview
  - Main Features
  - Software Requirement
  - Hardware Requirement
  - GUI examples
- AP601 IP Paging Terminal



# Network Diagram (General IP Broadcasting)



# Network Diagram (HQ, Branch Primary Secondary IP Broadcasting)

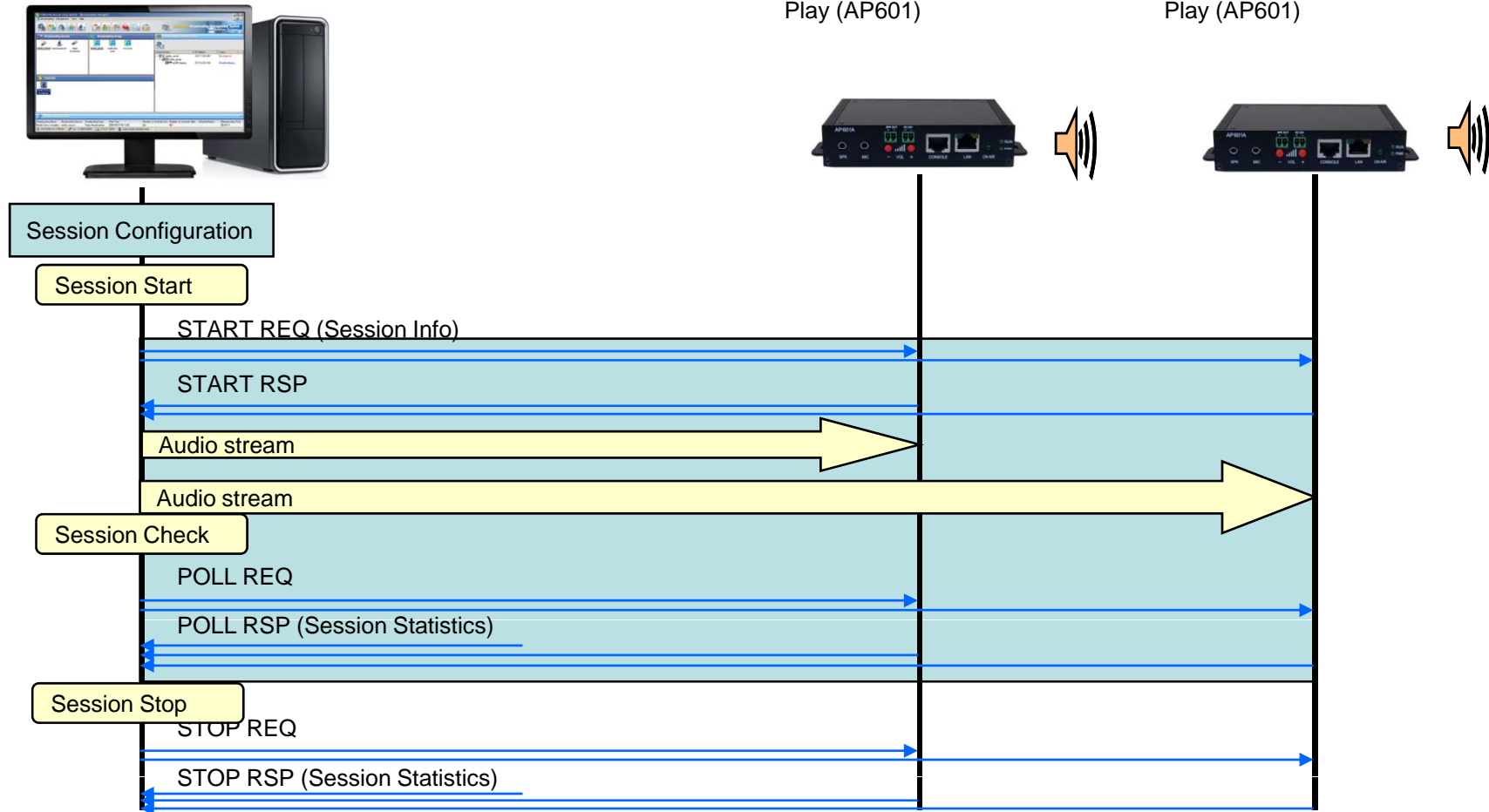


# Signal Flow Diagram (General IP Broadcasting)

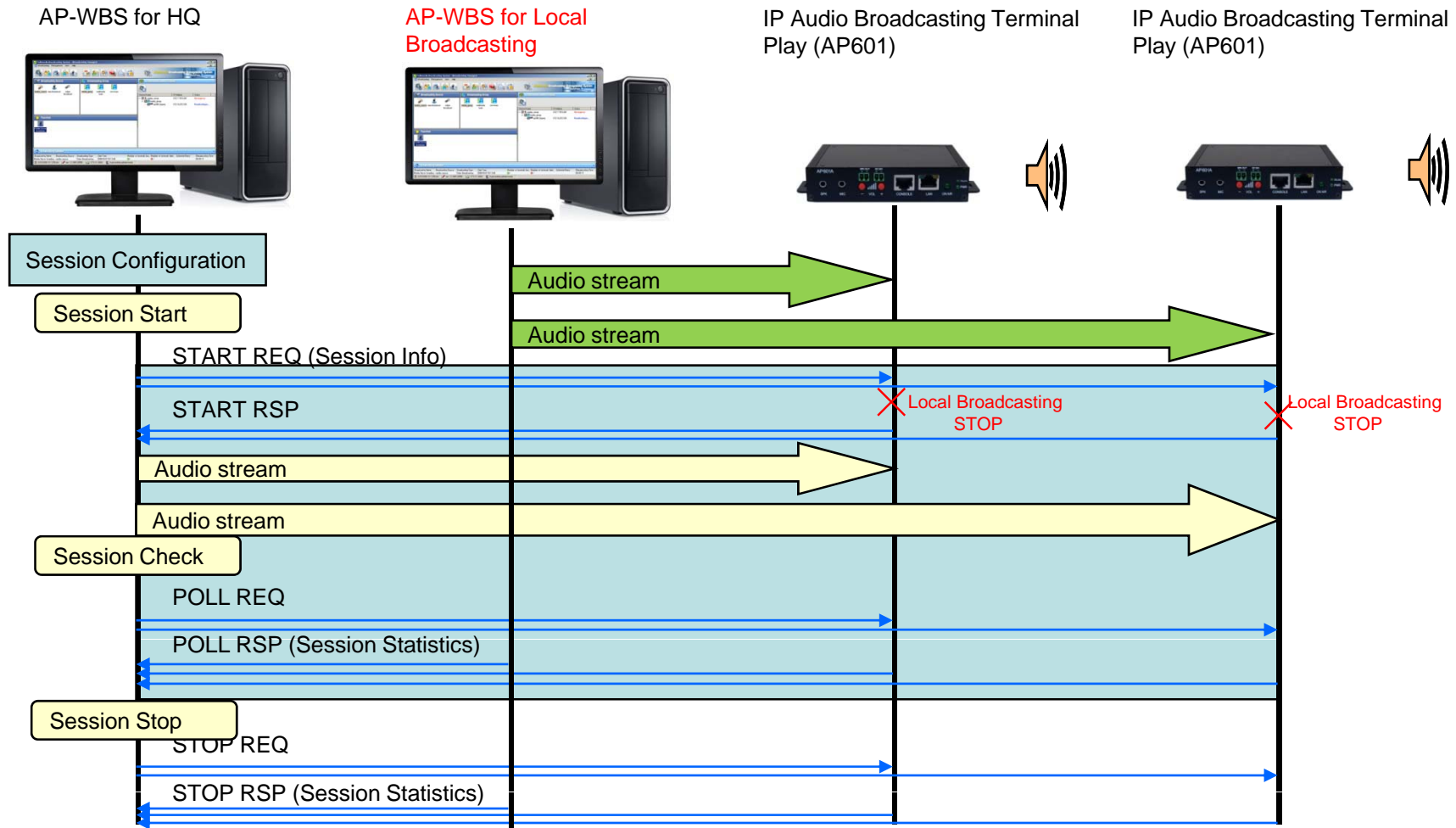
AP-WBS (IP Audio Broadcasting Server + Management Software)

IP Audio Broadcasting Terminal Play (AP601)

IP Audio Broadcasting Terminal Play (AP601)



# Signal Flow Diagram (HQ, Branch Primary Secondary IP Broadcasting)





# AP-WBS Product Overview

# Contents

- Main Features
- Software Requirement
- Hardware Requirement
- GUI examples



# Main Feature

- Window based IP Broadcasting Server with Management Software
- Unicasting/Multicasting Service Support
- RTP (Real-time Transmission Protocol) Support
- Various Voice/Audio Codec Support (G.711, SPEEX, etc)
- User Register and Access Restriction Management
- Broadcasting Device Management
- Broadcasting Source, Group, Favorite List Management
- Reserved Broadcasting and Time Signal Broadcasting
- TTS Broadcasting
- IP Broadcasting Terminal Status Check, etc
- Search Event Log

# Software Requirement

1. Database : MySQL Server 5.0
2. e-MBMS Server
  - Java JRE 1.5
  - e-MBMS Server
3. e-MBMS Client
  - e-MBMS Client

# Hardware Requirement

## 1. e-MBMS Server H/W Requirement

- CPU: Intel Pentium4 1GHz (minimum)
- MEMORY: 512Mbyte (minimum)
- HDD: 40GB
- OS: Windows XP, Windows 2000, Windows 7..

## 2. e-MBMS Client H/W Requirement

- CPU: Intel Pentium Series
- MEMORY: 256Mbyte (minimum)
- OS: Windows XP, Windows 2000, Windows 7..

# WBS GUI Initial Screen

**Broadcasting Source**

media\_source nms broadcast video broadcast

**Broadcasting Group**

media\_group multimedia team nms team

**Broadcasting Session Status**

Device Name	IP Address	Status
<input checked="" type="checkbox"/> media_server	172.17.101.247	No response
<input checked="" type="checkbox"/> media_group		
<input checked="" type="checkbox"/> vp200_hqiang	172.16.253.106	Broadcasting in ...

**Favorites**

Media Server broadcast

**Broadcasting Session**

Broadcasting Name	Broadcasting Source	Broadcasting T.type	Start Time	Number of terminals bei...	Number of terminals faile...	Schedule Name	Bbroadcasting Time
Media Server broadca...	media_source	Video Broadcasting	2008-03-27 10:13:46	1	1		00:00:13

3/27/2008 10:13:59 AM ver 1.2.2965.20959 127.0.0.1:8089 Super Admin (administrator)

# Broadcasting Device Management

**Device Properties**

Device Name: media\_server  
 Description:   
 IP Address: 172.17.101.247  
 Device Model: AP3120  
 Remote control of Broadcasting:   
 Module Information:

Slot	Module
0 (Slot)	<N/A>
1 (Slot)	AP-AUDIO2

Ok Cancel

**Broadcasting Session**

Broadcasting Name	Broadcasting Source	Broadcasting Type	Start Time	Number of terminals bei...	Number of terminals faile...	Schedule Name	Bbroadcasting Time
Media Server broadca...	media_source	Video Broadcasting	2008-03-27 10:13:46	1	1		00:03:09

3/27/2008 10:16:57 AM ver 1.2.2965.20959 127.0.0.1:8089 Super Admin (administrator)

# Broadcasting Group Management

The screenshot displays the 'Multimedia Broadcasting System - [Broadcasting Manager]' window. The 'Group Properties' dialog is open, showing the following details:

- Group Name: nms team
- Description: (empty)
- Buttons: Add Device, Add Group
- Setup for Amplifier: Amplifier 1, Amplifier 2, Amplifier 3 (all unchecked)
- Broadcasting Device List (Left Table):

Device Name	IP Address	Module	Port Number
landberg	172.16.19.100	AP-AV1000	(1/1) (1/0)
media_server	172.17.101.247	AP-AUDIO2	(1/0) (1/0)
media_server	172.17.101.247	AP-AUDIO2	(1/1) (1/1)
172.16.41.11	172.16.41.11	AP-VP300	(0/1) (0/0)
NMS_VP300	172.16.16.30	AP-VP300	(0/1) (0/0)
vp200_meeting_ro...	172.17.201.108	AP-VP300	(0/1) (0/0)
vp200_hgiang	172.16.253.106	AP-VP300	(0/1) (0/0)
phone_jschoi	172.16.19.101	AP-VP300	(0/1) (0/0)
VP200_phkwon	172.16.40.30	AP-VP300	(0/1) (0/0)

- Broadcasting device included in the group (Right Table):

Device Name	IP Address	Port Number
172.16.41.11	172.16.41.11	(0/1) (0/0)

At the bottom of the dialog are 'Ok' and 'Cancel' buttons. The system tray at the bottom shows the date/time (3/27/2008 10:18:54 AM), version (ver 1.2.2965.20959), IP address (127.0.0.1:8089), and user (Super Admin [administrator]).



# Reserved Broadcasting Management

**Multimedia Broadcasting System - [Reservation of Broadcasting Management]**

Broadcasting Management View Help

Multimedia Broadcasting Management System  
AddPac

Schedule Broadcasting Management

Schedule Name	Broadcasting ...	Start Time
Morning Broadcasting	General	10:21:27

**Schedule Properties**

Selecting Broadcasting: Media Server broadcast

Schedule Name:

Description:

Scheduled Broadcasting:  General  Time Information

Scheduling Method:  Day  Date

Select Day:  Mon  Tue  Wed  Thu  Fri  Sat  Sun

Broadcasting Time

Start Time: 3/27/2008 10:22:16

End Time: 3/27/2008 10:22:16

Audio File:  Select

Ok Cancel

**Broadcasting Session**

Broadcasting Name	Broadcasting Source	Broadcasting Type
Media Server broadca...	media_source	Video Broadcasti...

3/27/2008 10:22:10 AM ver 1.2.2965.20959 127.0.0.1:8089 Super Admin (administrator)



# TTS Broadcasting

The screenshot displays the 'Multimedia Broadcasting System - [Broadcasting Manager]' interface. The main window is titled 'TTS Broadcasting' and features a 'Favorites Name' dropdown menu set to 'Media Server broadcast'. Below this, there are two tabs: 'TTS' and 'TTS List'. The 'TTS' tab is active, showing a text area with the following content:

WASHINGTON (AFP) - The Pentagon on Wednesday said an eruption of violence in southern Iraq, where US-backed government forces were battling Shiite militias, was a "by-product of the success of the surge."

Pentagon press secretary Geoff Morrell said it showed that the Iraqi government and security forces were now confident enough to take the initiative against Shiite extremists in the southern port of Basra.

At the bottom of the 'TTS' tab, there is an 'Audio File Name' input field and a 'Start' button. A 'Close' button is located at the bottom right of the 'TTS' tab.

The 'TTS List' tab is also visible, showing a table with the following data:

IP Address	Status
nms team	172.16.41.11

The interface also includes a 'Broadcasting Source' section with icons for 'media\_source', 'nms broadcast', and 'video broadcast'. A 'Favorites' section shows 'Media Server broadcast'. The 'Broadcasting Session' section at the bottom has columns for 'Broadcasting Name', 'Broadcasting Source', and 'Bro...'. The system tray at the bottom shows the date and time as 3/27/2008 10:18:54 AM, version 1.2.2965.20959, IP address 127.0.0.1:8089, and the user Super Admin (administrator).

# AP601 Product Overview



# Contents

- Product Overview
- Hardware Specification
- APOS™ Service Features
- IP Audio Broadcasting Signal Flow
- Unicast & Multicast Service Feature
- IP Voice Broadcasting Solution
- Application Area
- Ordering Information



# Product Overview

## AP601 IP Paging Terminal

- IP based Voice Broadcasting Terminal Solution
- Hardware Architecture for Voice Broadcasting Terminal Service
- Remote Broadcasting Service at terminal side
- High Quality Voice Codec Support (High Quality Codec, G.711, etc)
- RTP/UDP Protocol Support
- Unicast and Multicast Broadcasting Scheme
- Enhanced MBMS (Multimedia Broadcasting Management System) Support
- WBS (Window based Broadcasting Management System) Support
- One(1) channel SPK/MIC Port
- Option (AP601A) : AMP. Built-in
- High-Quality Audio/Voice Service
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability
- External Power Supply

# Hardware Specification

## AP601 IP Paging Terminal



RISC  
CPU

High-end  
DSP

- RISC Microprocessor Computing Power
- High-end Programmable DSP Hardware Architecture
- High Quality Audio Encoding/Decoding Service
- One(1) 10/100Mbps Fast Ethernet (RJ45)
- One(1) RS-232C Interface (RJ45)
- SPK/MIC Audio Interface Support
- Volume Control Button Support (Up, Down)
- External Power Supply Support
- Option : 30Watt Digital AMP. Built-in (AP601A)

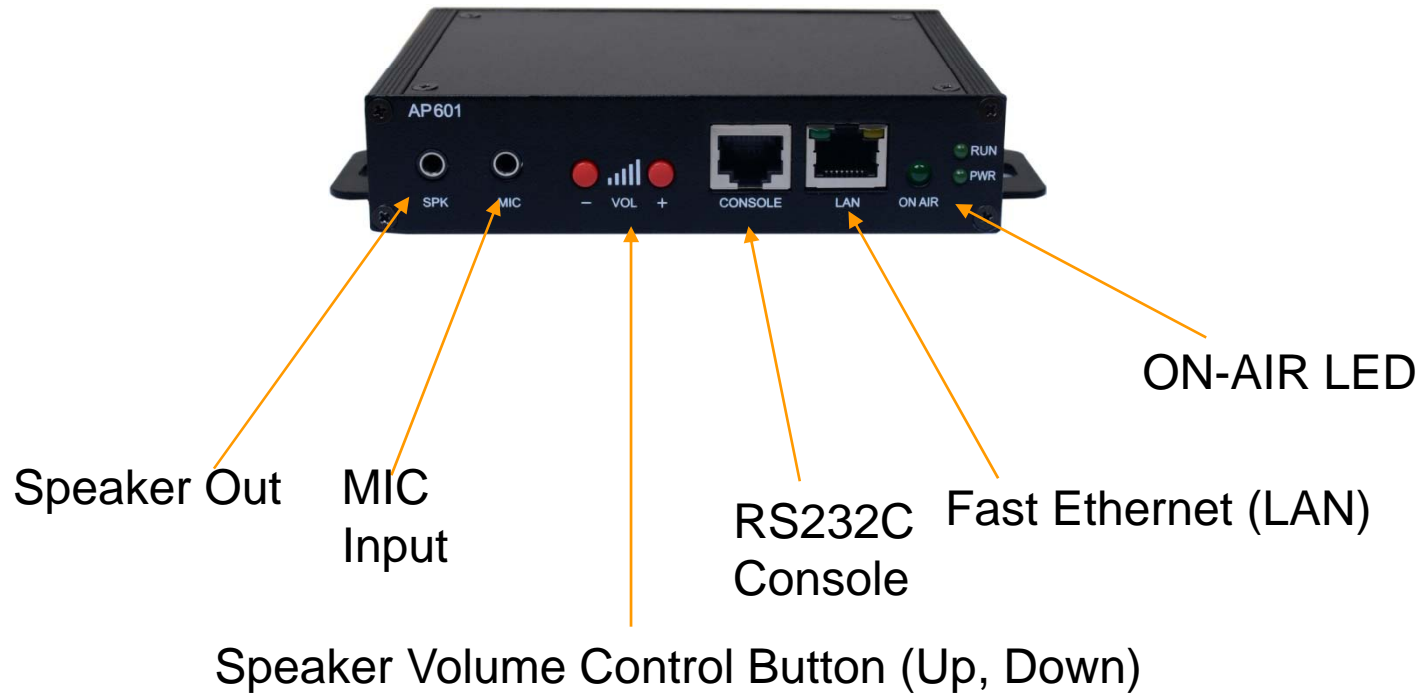
# Hardware Specification

AP601 IP Paging Terminal

RISC  
CPU

High-end  
DSP

## Front Side



# Hardware Specification

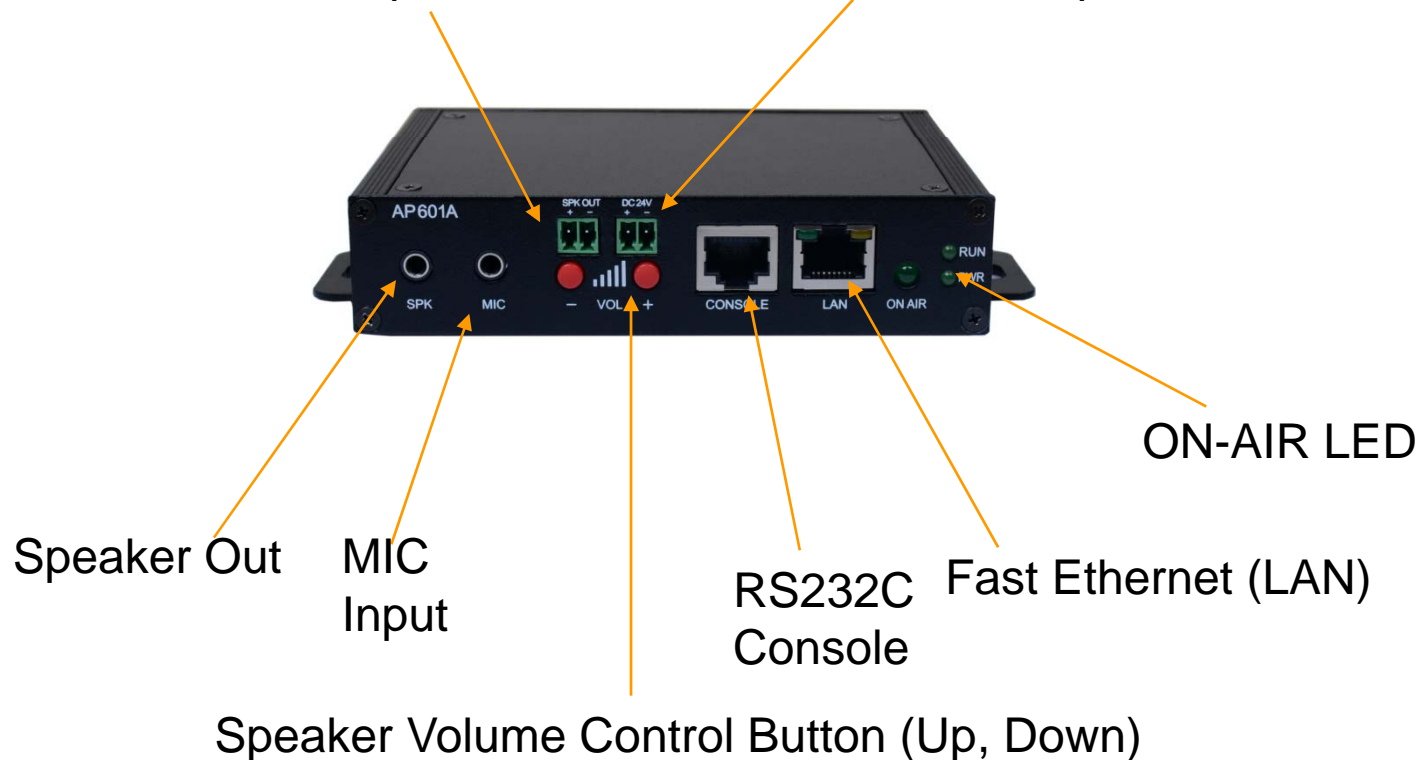
AP601A IP Paging Terminal

RISC  
CPU

High-end  
DSP

## Front Side (AMP. Built-In Model : AP601A)

AMP. Speaker Out      24V DC Power Input for Internal AMP.



# Hardware Specification

AP601 IP Paging Terminal

RISC  
CPU

High-end  
DSP

## Back Side



External Power  
Supply Adaptor

Power Switch

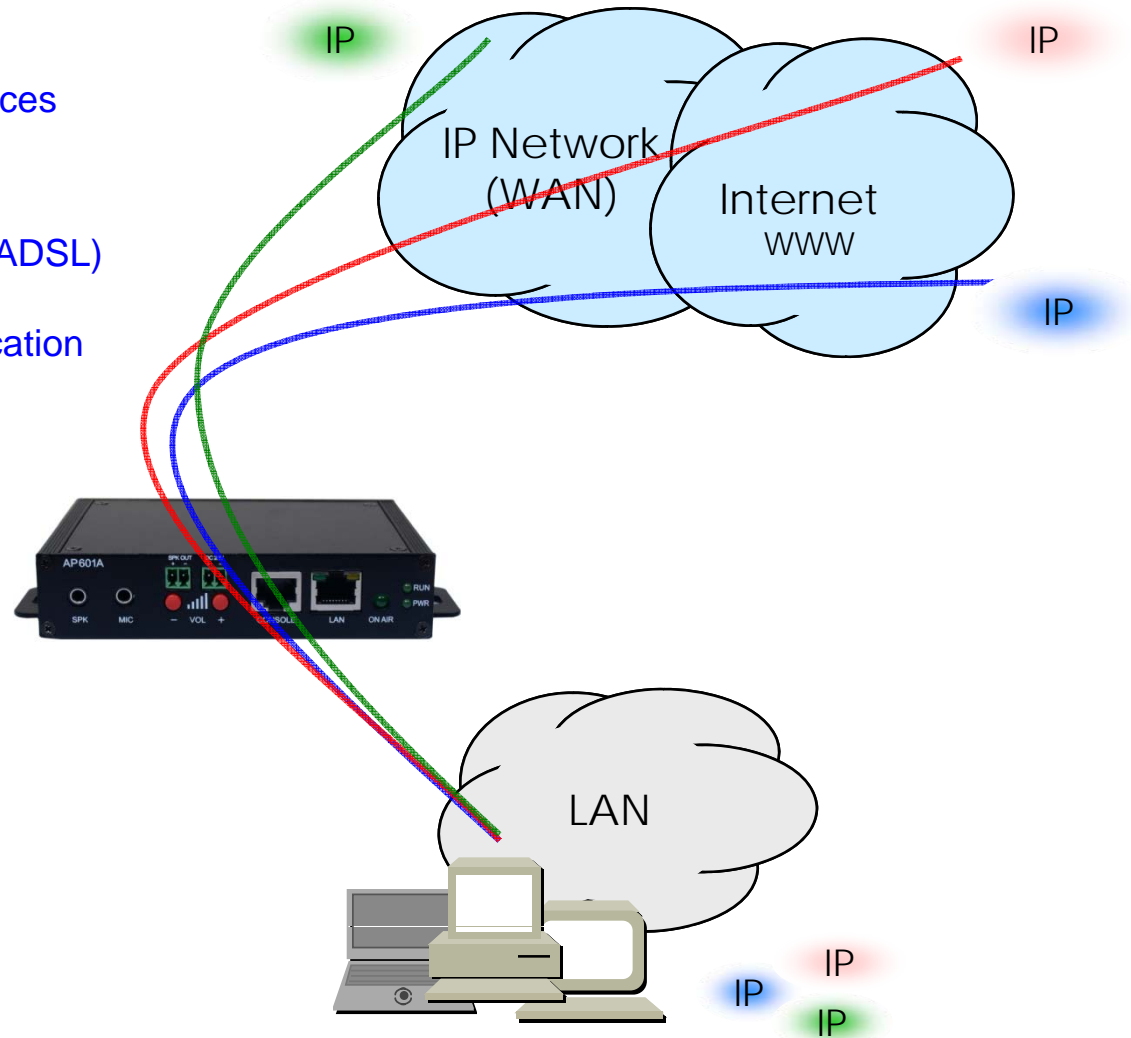




# APOS™ Service Features

## AP601 IP Paging 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

## AP601 IP Paging 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

## AP601 IP Paging Terminal

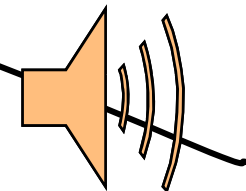
- Network Protocols
  - DHCP Server & Relay Functions
  - Network Address Translation (NAT) Function
  - Port Address Translation (PAT) Function
  - Transparent Bridging (IEEE Standard) Function
    - Spanning Tree Bridging Protocol Support
    - Remote Bridging Support
    - Concurrent Routing and Bridging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

# APOS™ Service Features

## AP601 IP Paging Terminal

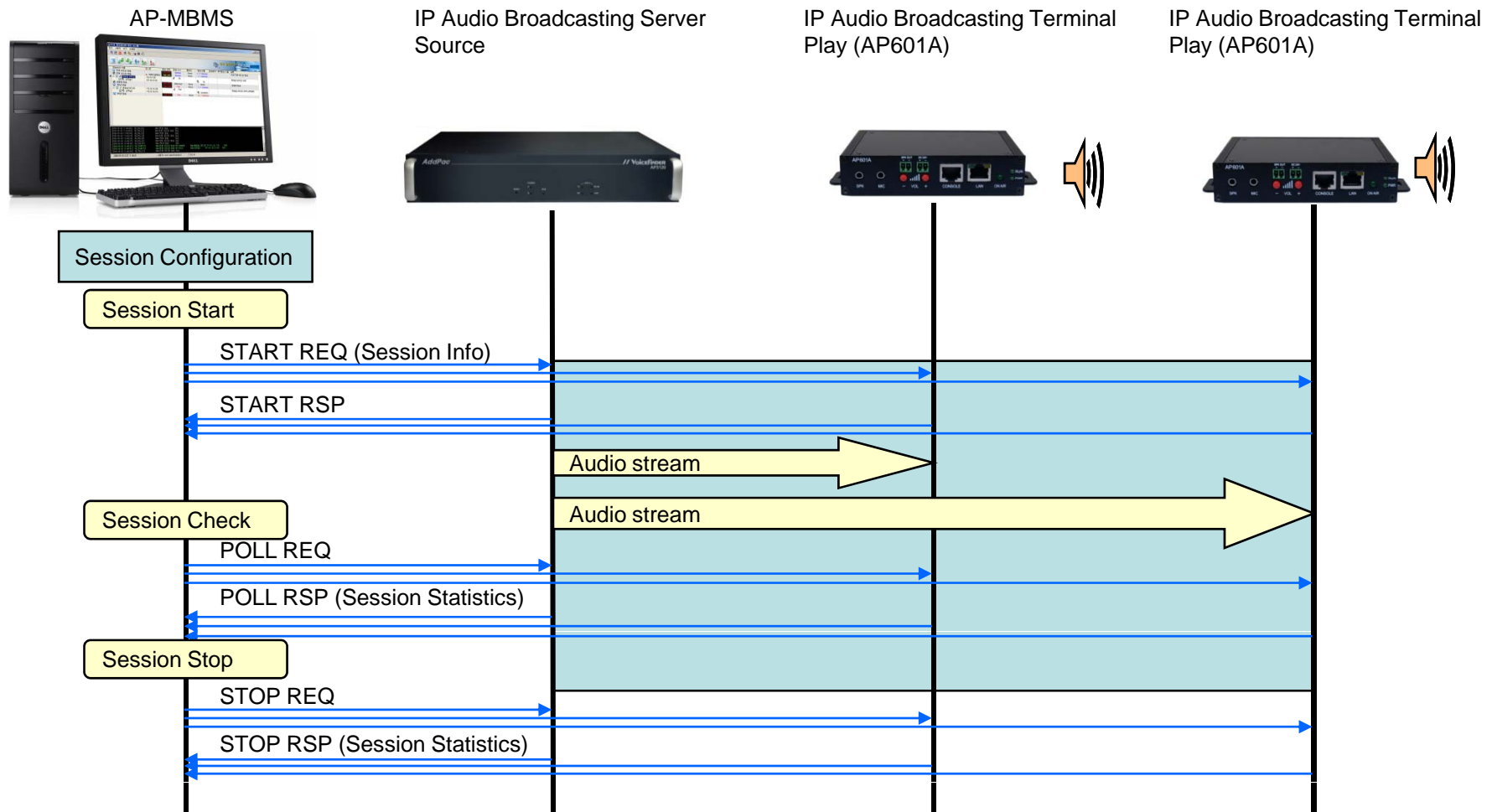
- Audio Codec
  - G.711, G.726, Audio Codec
- RTP Protocols
  - Redundant RTP packet transmission in case of severe packet loss
  - Dynamic jitter buffer management and RTP packet jitter and loss compensation with heuristic & DSP error concealment
  - Static jitter buffer setting support
  - Voice frame per RTP packet number control for each codec

IP Broadcasting



# IP Audio Broadcasting Signal Flow (CASE1)

## AP601 IP Paging Terminal



# IP Audio Broadcasting Signal Flow (CASE 2)

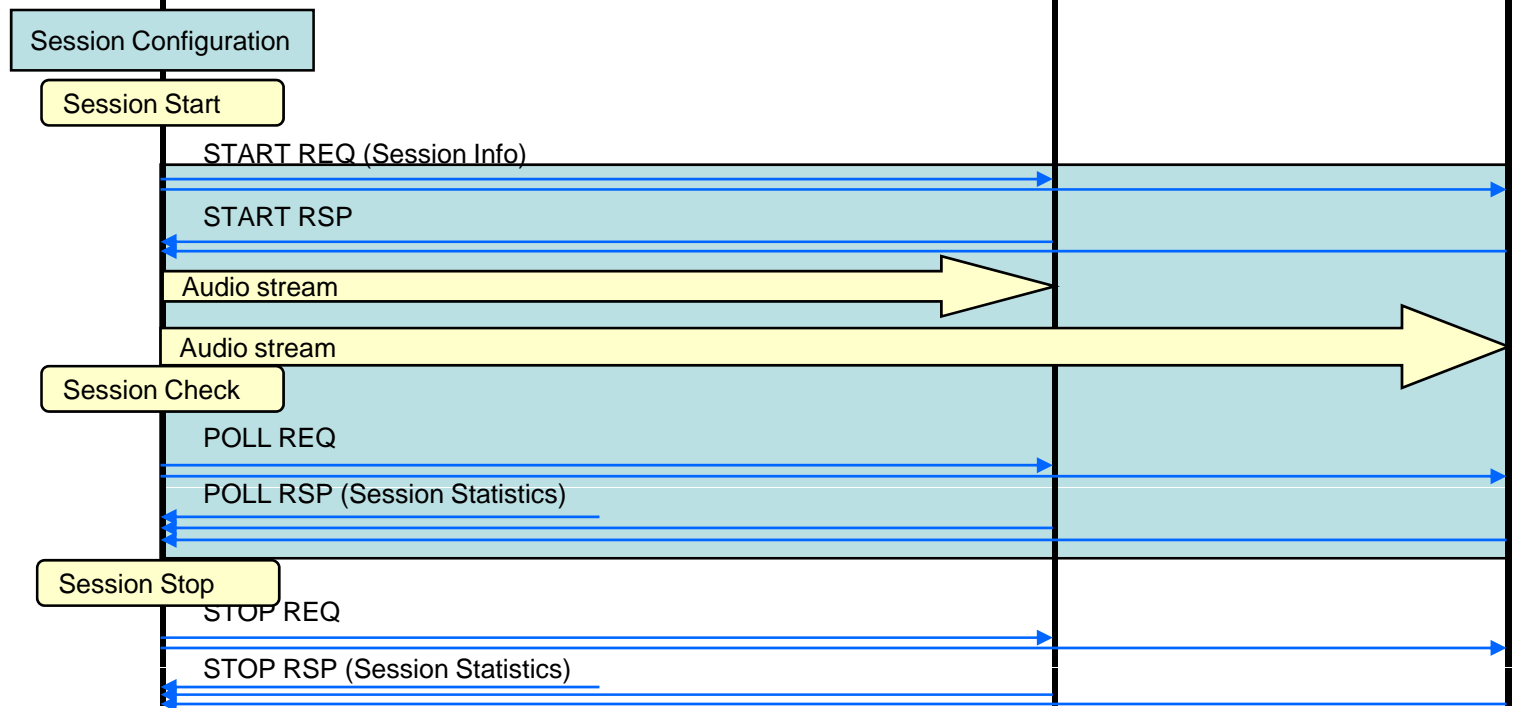
## AP601 IP Paging Terminal

IP Audio Broadcasting Server + Management Source



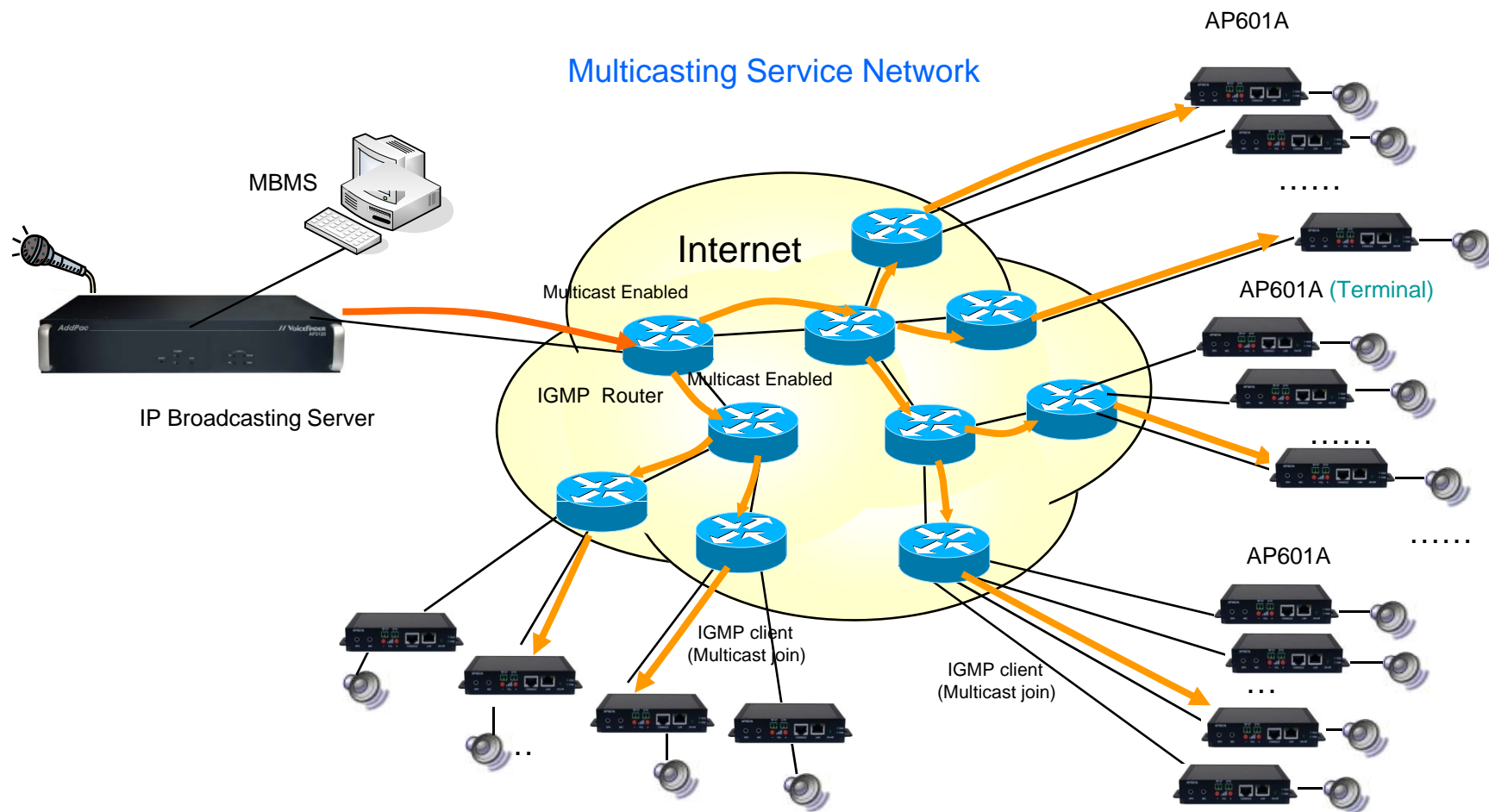
IP Audio Broadcasting Terminal Play (AP601)

IP Audio Broadcasting Terminal Play (AP601)



# Multicast Service Network Diagram

## AP601 IP Paging Terminal



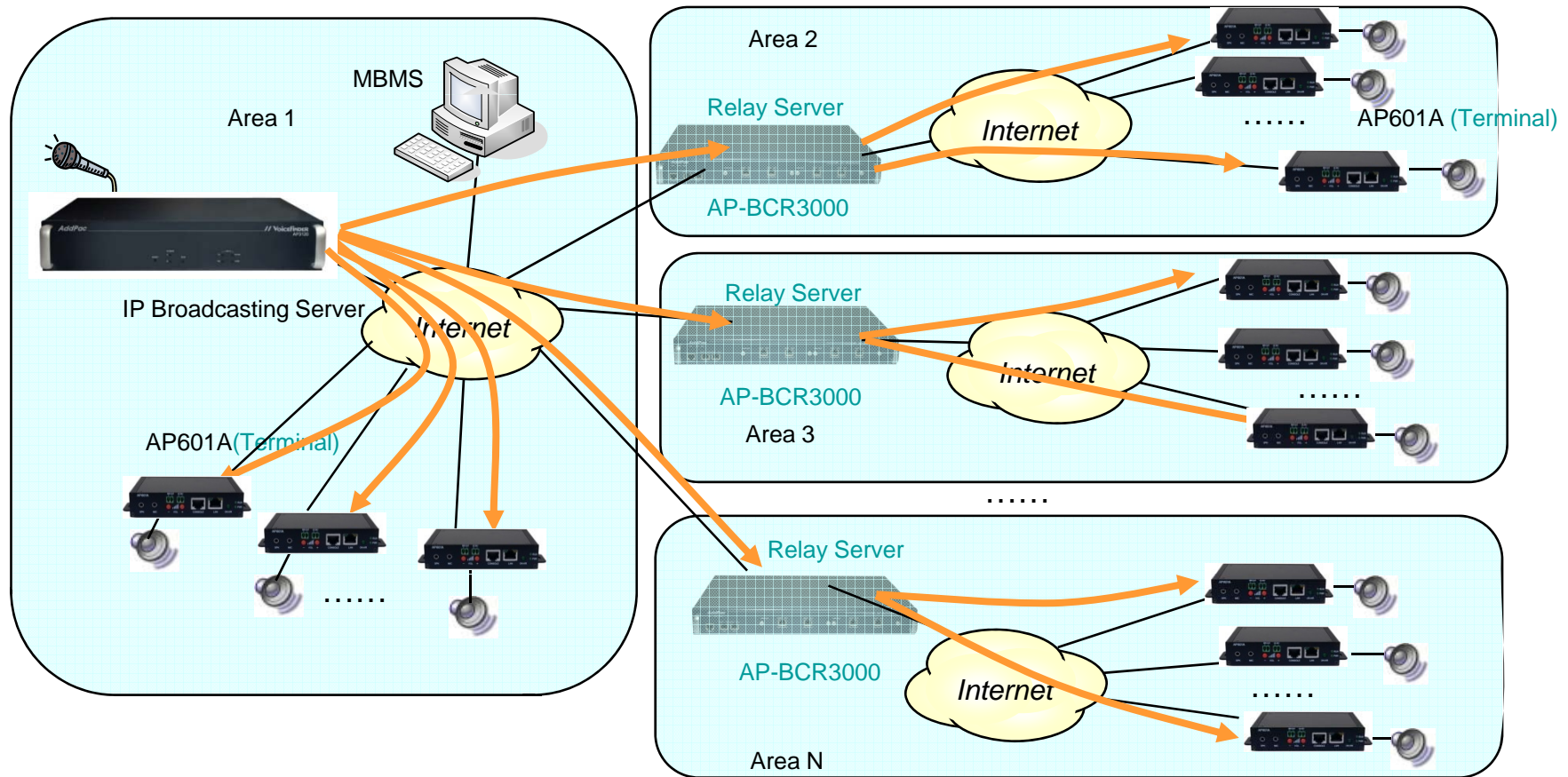
- Multicast protocol based such as **IGMP Protocol**
- Available to broadcast multi destination with single channel bandwidth








# Unicast Service Network Diagram

AP601 IP Paging Terminal

Unicasting Service Network



# IP Voice Broadcasting Solution

Audio Broadcasting Manager S/W	IP Broadcasting Server	Audio Broadcasting Router (Relay Server)	IP Paging Terminal AP601, AP601A
	 <p>AP3120</p>  <p>AP3110 (small site)</p>		
<p>Window based Audio Broadcasting Management Software.</p>	<p>Embedded Hardware based Broadcasting Server, Voice Codec Module, Voice Codec, G.711, G.726</p>	<p>1:N Audio Broadcasting Router. Gigabit Ethernet Support</p>	<p>Embedded Hardware based Audio Terminal. <b>Volume Control</b> <b>Built-in AMP.</b>(AP601A) G.711, G.726, Audio Codec.</p>

# IP Voice Broadcasting Solution (Simple Application for Small Site)

Audio Broadcasting  
Manager +  
IP broadcasting server  
S/W

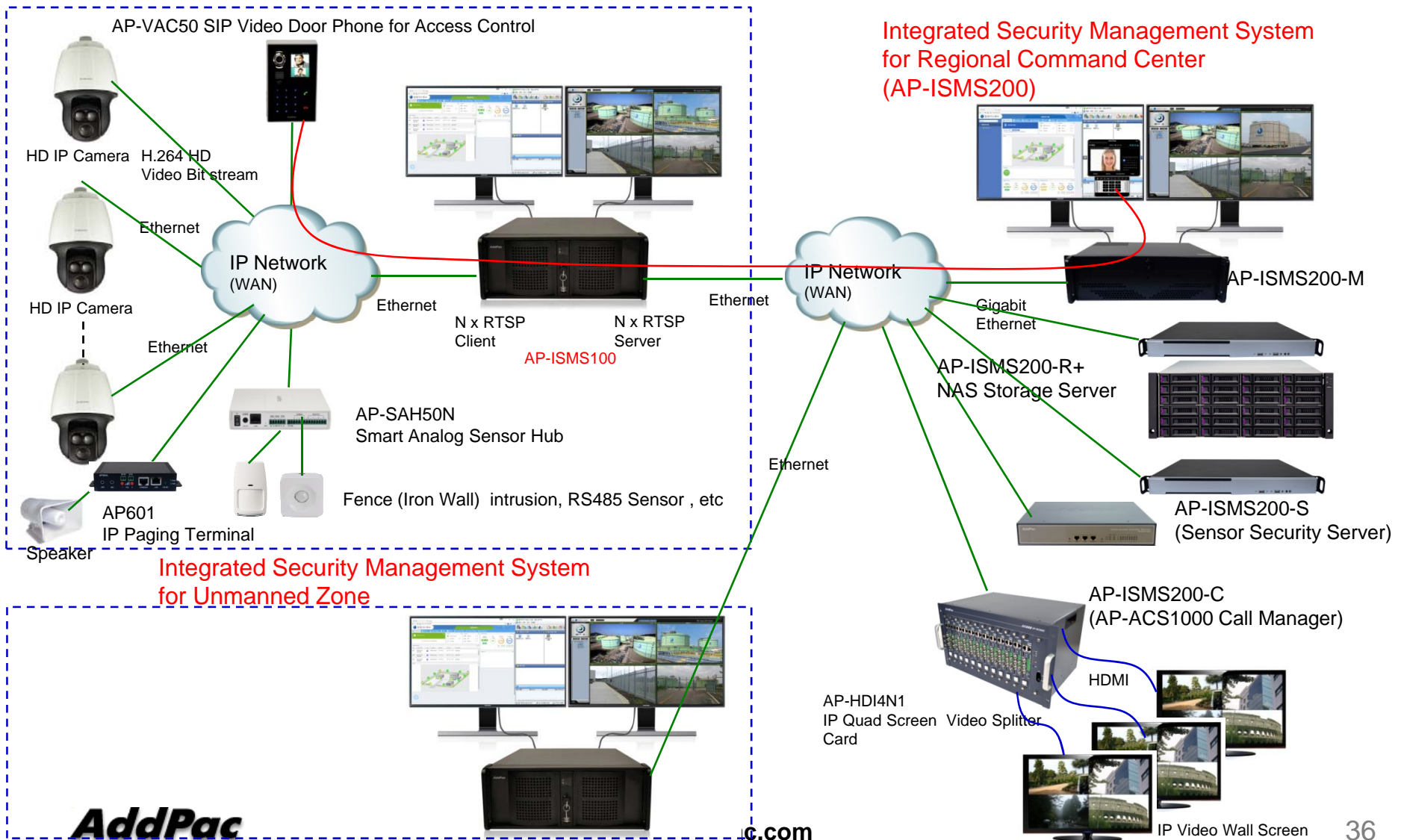
IP Paging Terminal  
AP601, AP601A



Window based Audio  
Broadcasting Management  
& Server Software.

Embedded Hardware based  
Audio Terminal.  
**Volume Control**  
**Built-in AMP.**(AP601A)  
G.711, G.726, Audio Codec.

# Application Service (Integrated Security Management System)



# Ordering Information

- AP601, AP601A IP Paging Terminal Hardware
  - RISC Microprocessor with High-end Programmable DSP Architecture
  - One(1) 10/100Mbps Fast Ethernet
  - One(1) RS232C (RJ45) Port
  - SPK/MIC Interface
  - Volume Control Button (UP, DOWN)
  - ON-AIR LED
  - Option : AP601A AMP.built-in
  - Including Network Cable Set & External Power Supply, etc.
- Built-in APOS Internetworking Software for AP601, AP601A
- 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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