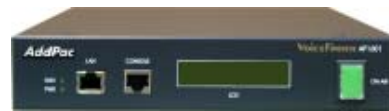# AP3110
IP Voice Broadcasting Server

High Performance IP based Multichannel IP High Quality Voice Broadcasting Server

AddPac Technology

Sales and Marketing

Contents

- Product Overview

- Product Highlight

- Hardware Specification

- APOS^{TM} Service Features

- IP Voice Broadcasting Signal Flow

- Unicast & Multicast Service Feature

- MBMS v2.0 Software Features

- IP Voice Broadcasting Solution

- Application Area

- Ordering Information

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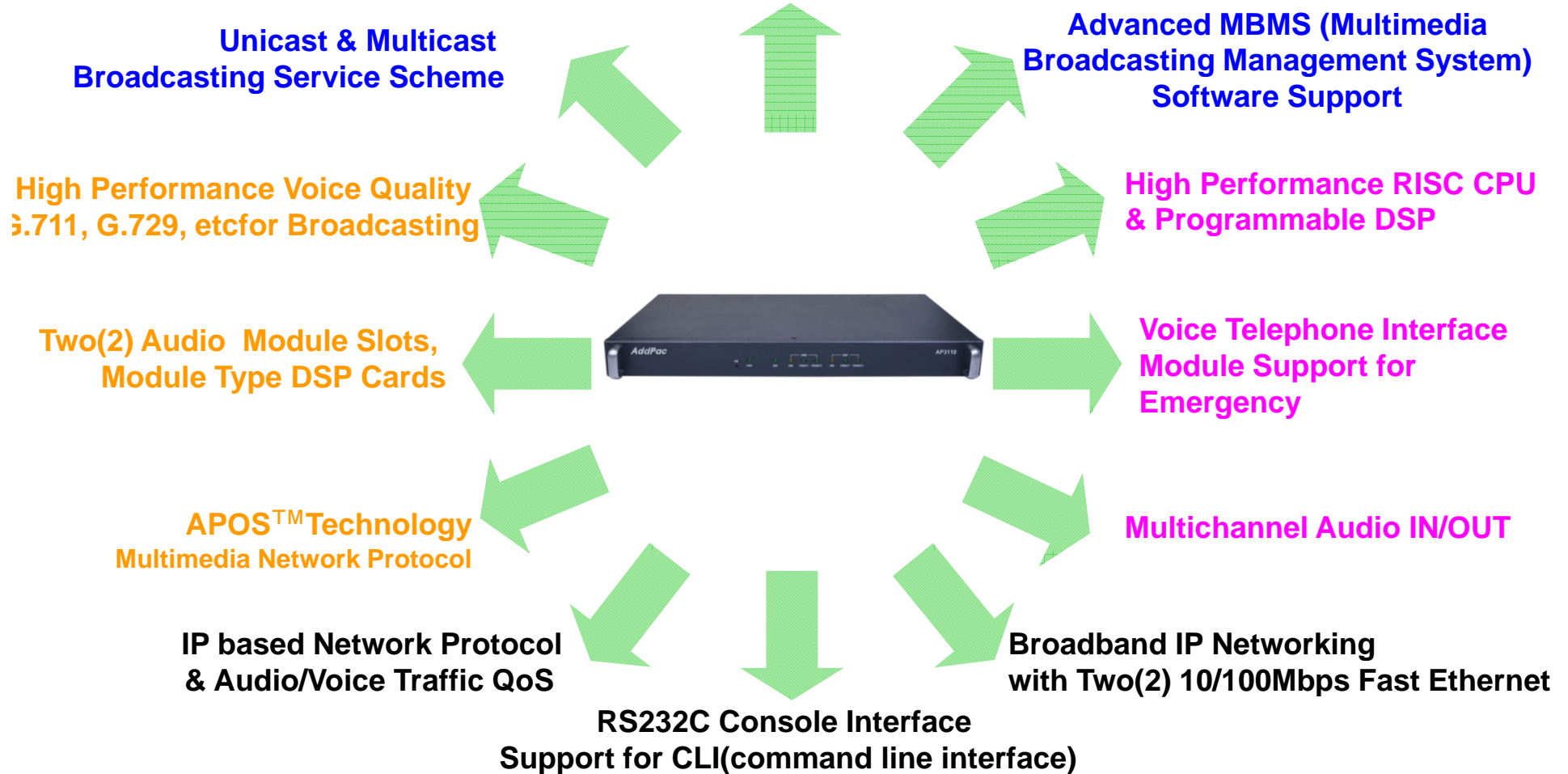# Product Overview

- IP based Voice Broadcasting Solution
- IP Voice Broadcasting Server for Small Enterprise (4~8 terminal)
- Hardware Architecture for Multichannel Voice Broadcasting Service
- Two(2) Module Slots for Multichannel Voice Encoding Service
- High Performance DSP based Voice Codec Support (G.711, G.729, etc)
- Unicast and Multicast Broadcasting Scheme
- Enhanced MBMS (Multimedia Broadcasting Management System) Support
- Multichannel Audio IN/OUT Port
- Voice Telephone Interface Module Support for Emergency
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability
- "19inch Rack Mountable Compact Broadcasting Server with Internal Power Supply

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Product Highlights

AP3110 IP Voice Broadcasting Server

Multichannel IP Broadcasting Server

Unicast & Multicast Broadcasting Service Scheme

Advanced MBMS (Multimedia Broadcasting Management System) Software Support

High Performance Voice Quality G.711, G.729, etcfor Broadcasting

High Performance RISC CPU & Programmable DSP

Two(2) Audio Module Slots, Module Type DSP Cards

Voice Telephone Interface Module Support for Emergency

APOS^{TM}Technology Multimedia Network Protocol

Multichannel Audio IN/OUT

IP based Network Protocol & Audio/Voice Traffic QoS

Broadband IP Networking with Two(2) 10/100Mbps Fast Ethernet

RS232C Console Interface Support for CLI(command line interface)

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Hardware Specification

RISC
CPU

High-end
DSP

- RISC Microprocessor Computing Power

- High-end Programmable DSP Hardware Architecture

- Two(2) Module Slots for Audio Broadcasting Codec Module

- High quality Audio and Voice Interface

  – Audio Input Connector (Line Input, MIC Input)

  – Audio Output Connector

- Network Interface

  – Two(2) 10/100Mbps Fast Ethernet (RJ45)

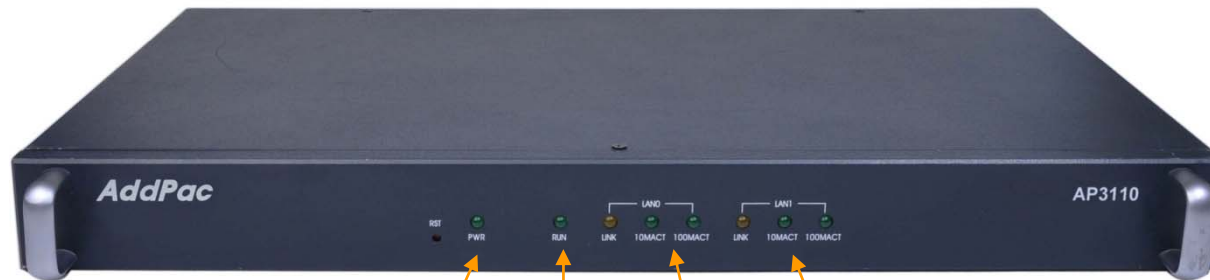 – One(1) RS-232C Interface (RJ45) for Command Line Interface

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Hardware Specification

AP3110 IP Voice Broadcasting Server

AP3110 Front Side

Power LED   Run LED   LAN0 LEDs   LAN1 LEDs

Hardware Specification

AP3110 IP Voice Broadcasting Server

AP3110 Back Side

Power ON/OFF
Switch

Audio Input   Audio Output   Power Input

2-Port Audio Module (Input,Output)

Console Port   10/100Mbps FE   10/100Mbps FE
(RJ45)   LAN0 (RJ45)   LAN0 (RJ45)

Blank Slot
For Additional Audio Module

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Hardware Specification

AP3110 IP Voice Broadcasting Server

RISC CPU

High-end DSP

Target	Voice Modules	Module Features	Module Picture
AP3110	AP-AUDIO2	2-Pair Audio-In/Out Ports Voice Band IP Broadcasting	
AP3110	AP-AUD1S3	1-Pair Audio-In/Out Ports, FXS Analog Interface Voice Band IP Broadcasting	
AP3110	AP-AUD1S2O1	1-Pair Audio-In/Out Ports, FXS 2-Ports, FXO 1-Port Voice Band IP Broadcasting	

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APOS™ Service Features

AP3110 IP Voice Broadcasting Server

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

MBMS
(GUI based Manager)

VoIP

IP Routing

IP Network
(WAN)

Remote Access Broadcasting

PPPoE

IP Sharing FTP/TFTP VLAN Routing

Data

NAT/PAT

Cisco Style CLI

SNMP

Telnet

Audio Broadcasting

Voice Codec

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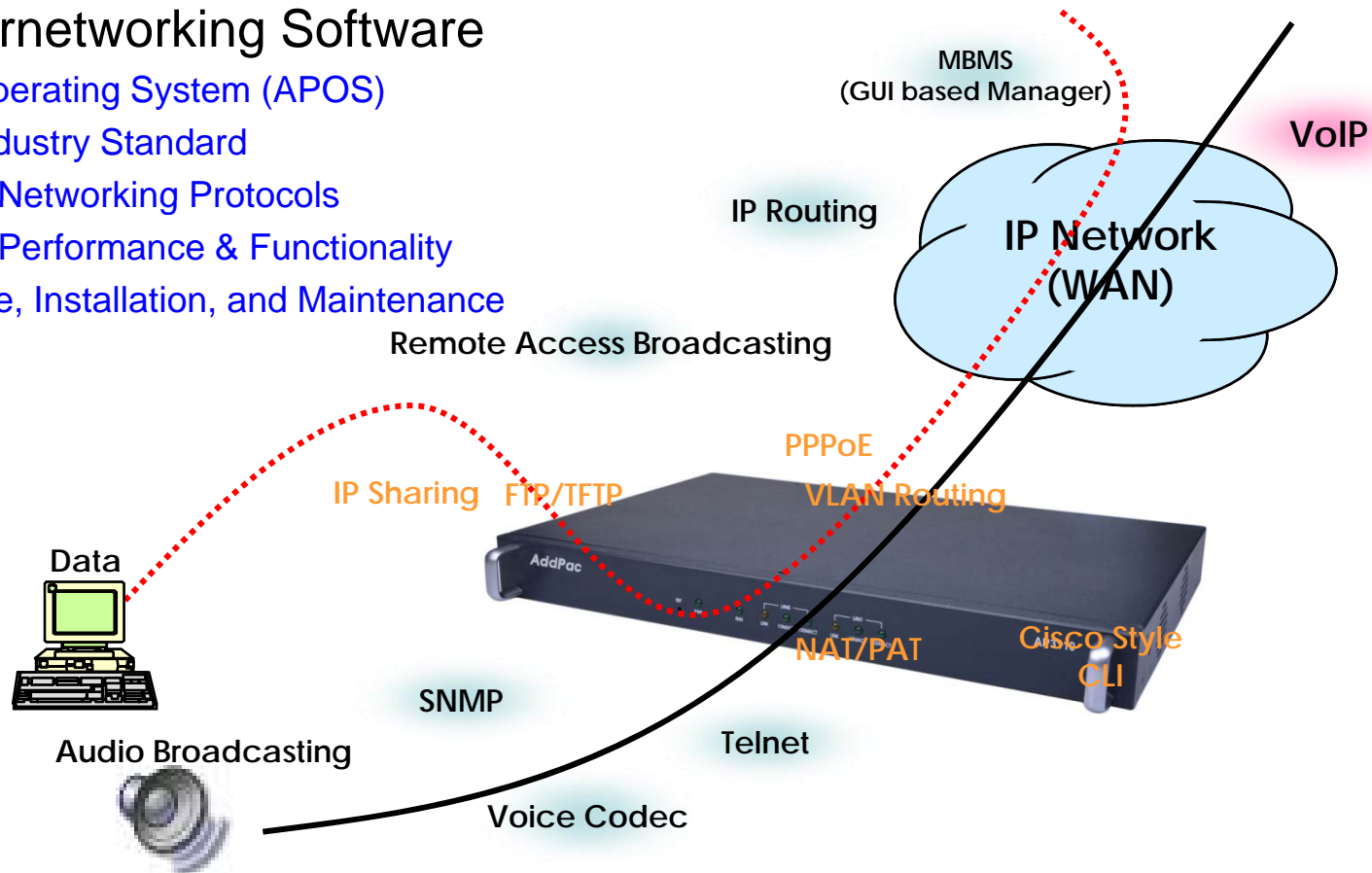
APOS^{TM} Service Features

- IP Routing Protocols
  - Multi-protocol Internetworking Services
  - Static & Default IP routing
  - Transparent Bridging (IEEE Spanning Tree Protocol)

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

IP

IP

IP Network
(WAN)

Internet
WWW

IP

AddPac   AP3110

LAN

IP

IP

IP

IP

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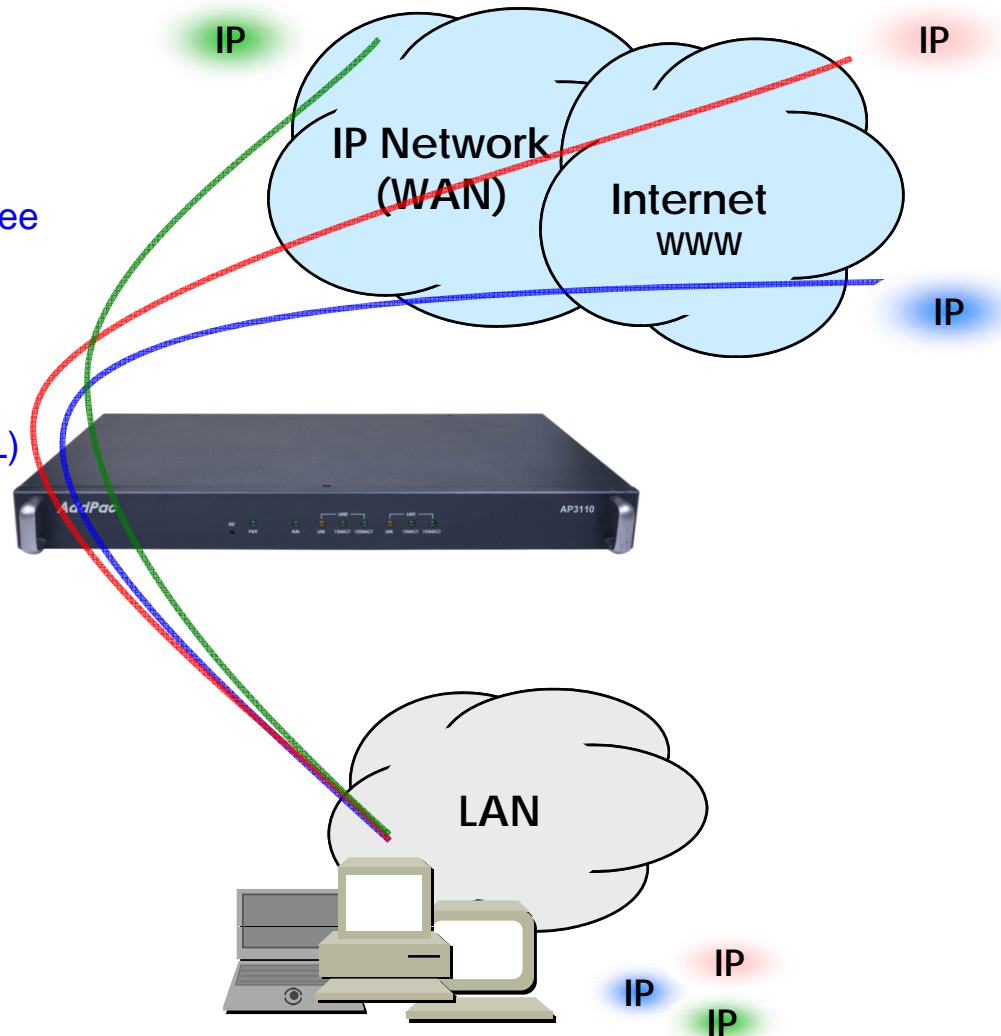
APOS^{TM} Service Features

AP3110 IP Voice Broadcasting Server

- 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

AP3110 IP Voice Broadcasting Server

- **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

- **MBMS (Multimedia Broadcast Management System)**
  - MS Windows Graphical User Interface (GUI) based Audio Broadcasting Management
  - Service Group Configuration
  - Scheduled Broadcasting
  - Status Monitoring
  - Report Service
  - Embedded Media file Manager

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APOS™ Service Features

AP3110 IP Voice Broadcasting Server

- Voice Codec for Two(2) Channel Audio Module
  – G.711 Voice Codec
  – G.726 Voice Codec
  – G.729 Voice Codec
  – G.723 Voice Codec

IP Broadcasting

- RTP Protocols
  – Redundant RTP packet transmission in case of severe packet loss
  – Dynamic jitter buffer management and RPT 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

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IP Broadcasting Signal Flow

AP3110 IP Voice Broadcasting Server
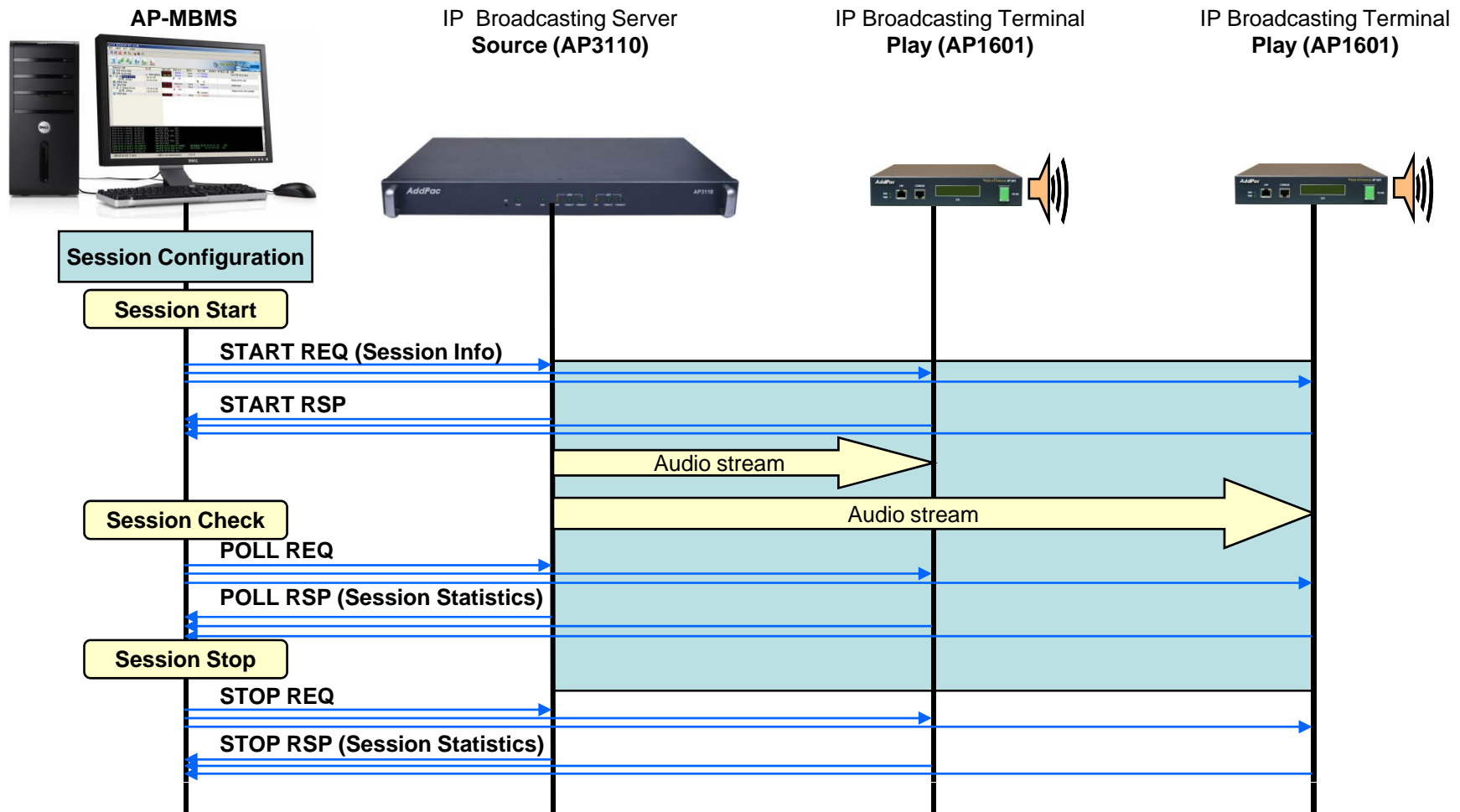
Multicast Service Network Diagram

AP3110 IP Voice Broadcasting Server
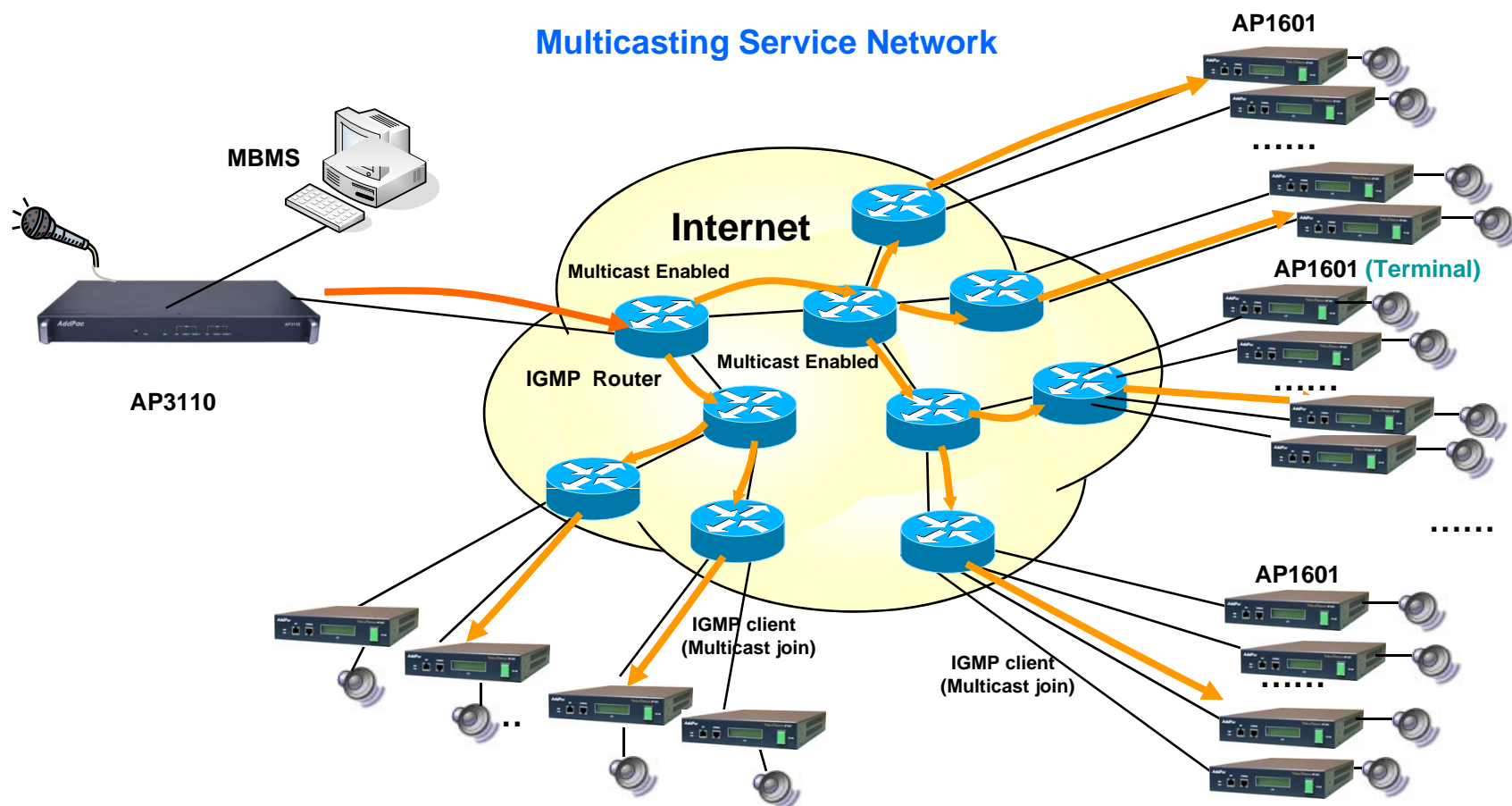
- Multicast protocol based such as **IGMP Protocol**
- Available to broadcast multi destination with single channel bandwidth

Unicast Service Network Diagram

AP3110 IP Voice Broadcasting Server

Unicasting Service Network

MBMS

AP1601 **(Terminal)**

AP3110**(Source)**

Internet

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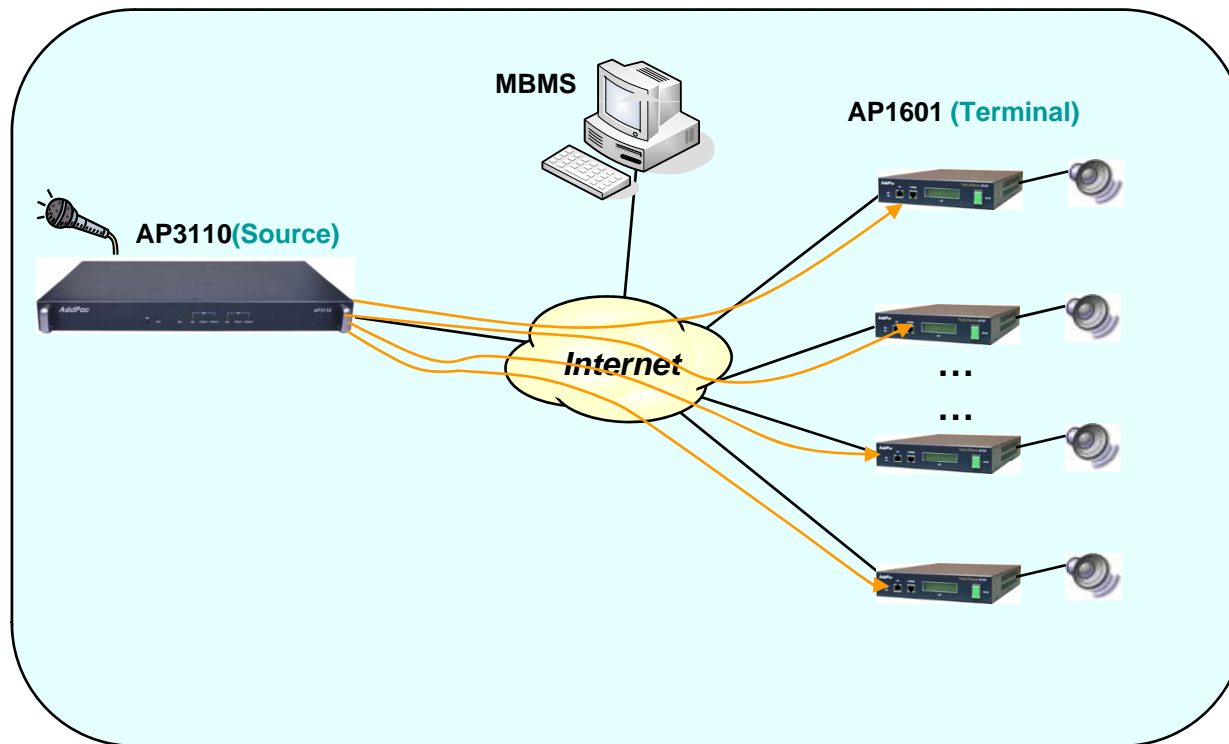
Unicast Service Network Diagram

AP3110 IP Voice Broadcasting Server

Unicasting Service Network
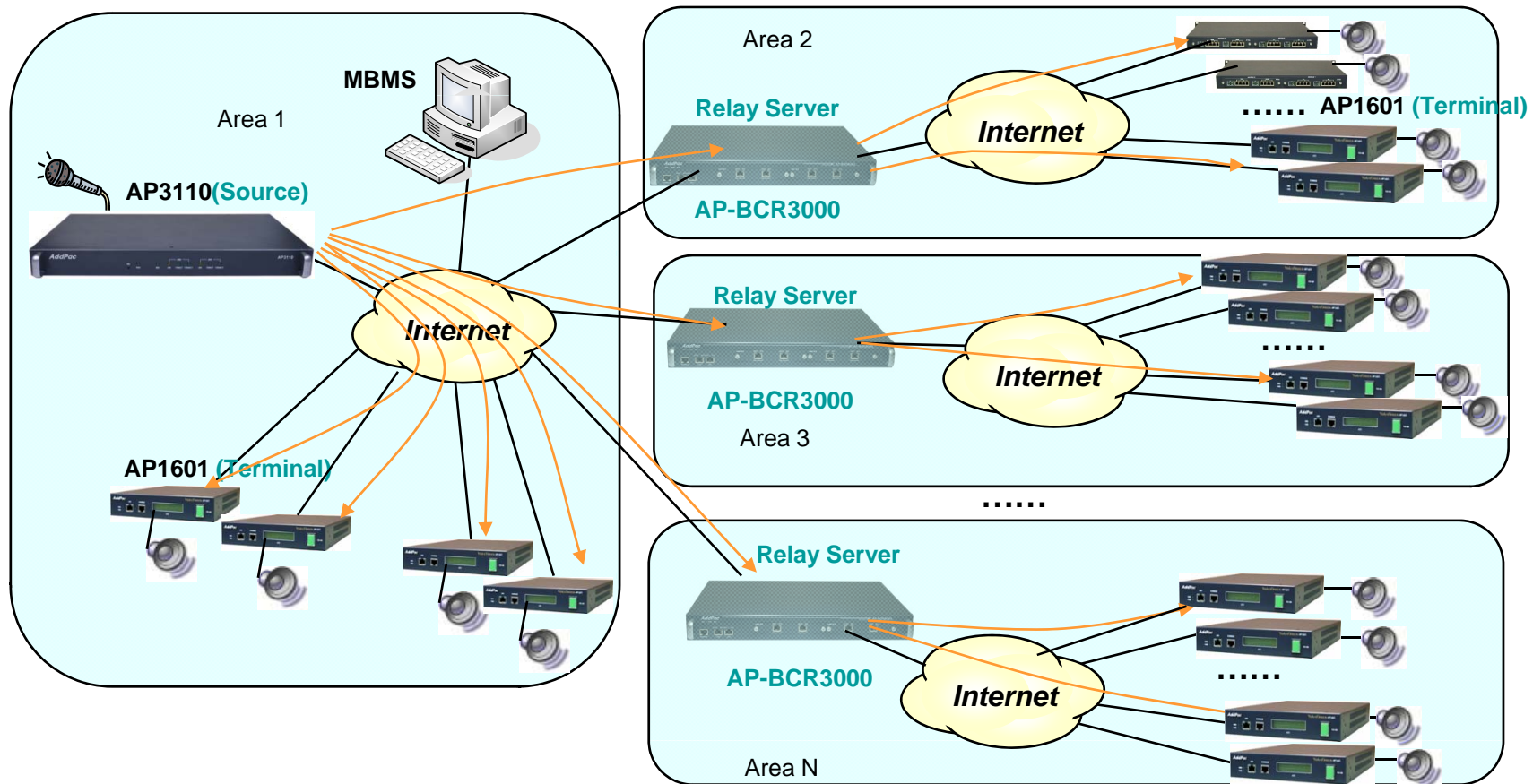
MBMS 2.0 Software Features

AP3110 IP Voice Broadcasting Server

- User Registration Management
- User Access Restriction
- Broadcasting System Management
- Broadcasting Session Management
- Scheduling Broadcasting and On-time Broadcasting
- Emergency Broadcasting Management
- Scheduling Stop Management
- Event Log Management
- MBMS System Redundancy & Auto Data Backup

MBMS 2.0 Software Features

AP3110 IP Voice Broadcasting Server

MBMS S/W Startup (Example)

AP3110 IP Voice Broadcasting Server

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Broadcasting Equipment Management (Example)

AP3110 IP Voice Broadcasting Server

Broadcasting Configuration (Example)

AP3110 IP Voice Broadcasting Server
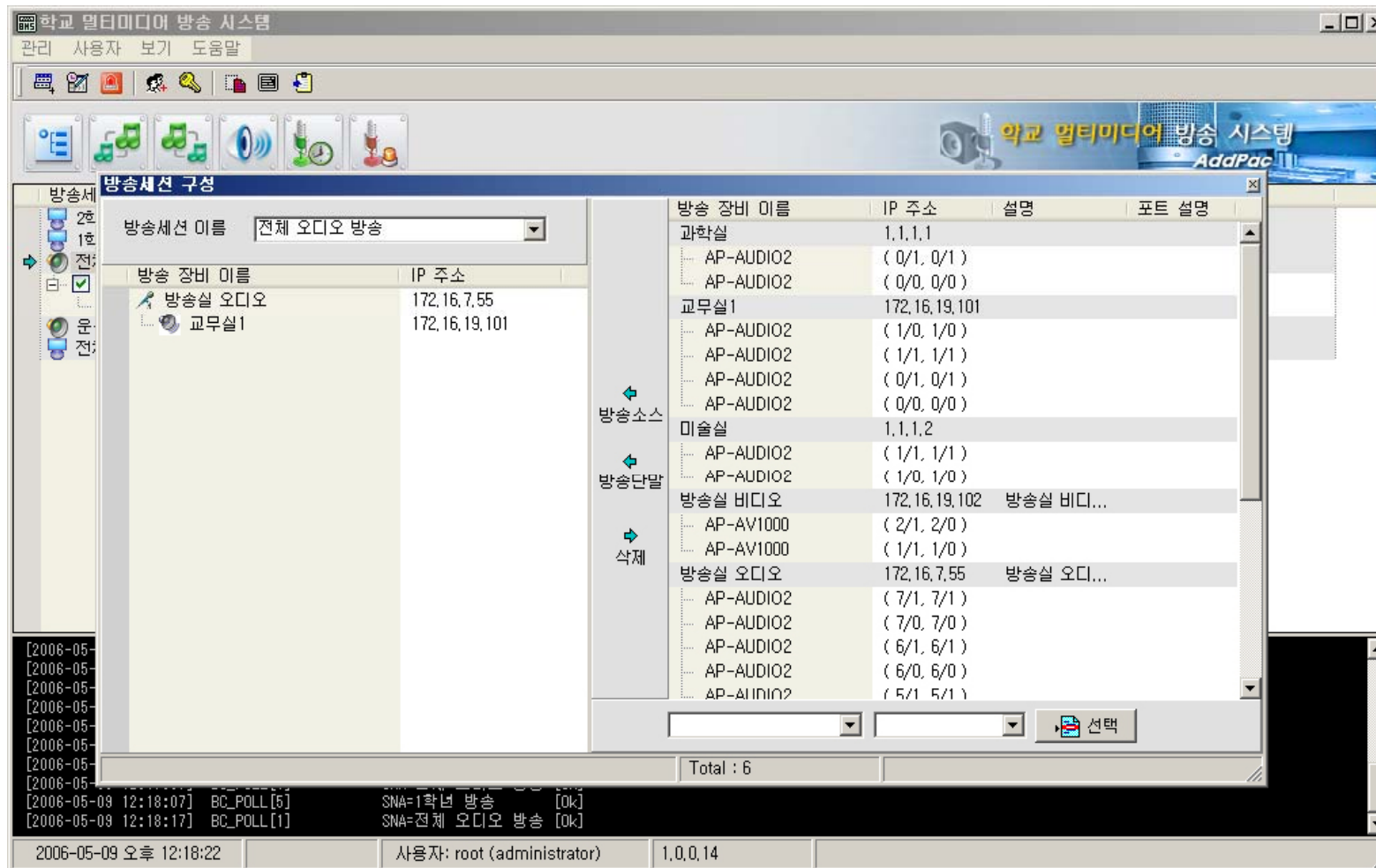
Broadcasting Scheduling (Example)

AP3110 IP Voice Broadcasting Server

Event Log (Example)

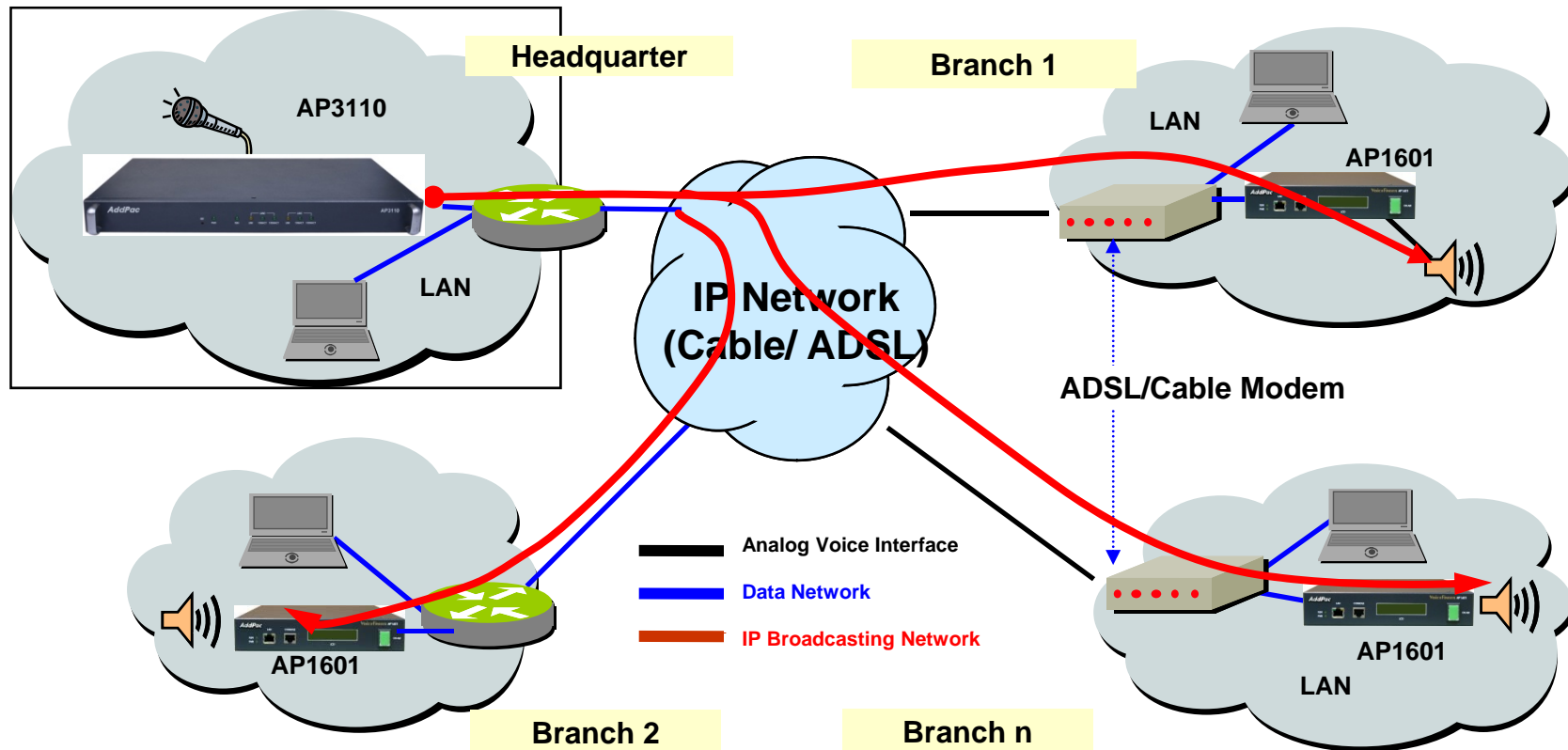## AP3110 IP Voice Broadcasting Server

IP Voice Broadcasting Solution

AP3110 IP Voice Broadcasting Server

Audio Broadcasting Manager S/W	IP Broadcasting Server AP3110	IP Broadcasting Router (Relay Server)	HQ Audio Broadcasting Terminal AP1601N	AMP. On/Off Power Switch Box AP-PSB
Window based Audio Broadcasting Management Software.	Embedded Hardware based Audio Codec. Two(2) Voice Codec Module Slots G.711, G.726, G.729 Voice Codec	1:N Audio Broadcasting Router. Gigabit Ethernet Support	Embedded Hardware based Audio Terminal One(1) Voice Codec Module. G.711, G.726,G.729 Voice Codec.	AMP. Power ON/OFF Switch Box. Background Noise Remove at OFF-AIR

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Application Service

Headquarter

AP3110

LAN

Branch 1

LAN

AP1601

**IP Network
(Cable/ ADSL)**

ADSL/Cable Modem

AP1601

Branch 2

Branch n

AP1601

LAN

▬▬	**Analog Voice Interface**
▬▬	**Data Network**
▬▬	**IP Broadcasting Network**

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Ordering Information

- **AP3110 IP Broadcasting Server Hardware**
  - AP3110 Main Body
  - RISC Microprocessor with High-end Programmable DSP Architecture
  - 2-ports 10/100Mbps Fast Ethernet and 1-port RJ45 RS-232C Console
  - AP-Audio2 Module, etc (Up to 2 slot)
  - Including Network Cable Set & Power Supply, etc.
- **Built-in APOS Internetworking Software for AP3110**
- **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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