

AP1601

IP Voice Broadcasting Terminal

High Performance IP Voice Broadcasting Terminal Solution



AddPac

AddPac Technology

Sales and Marketing

www.addpac.com

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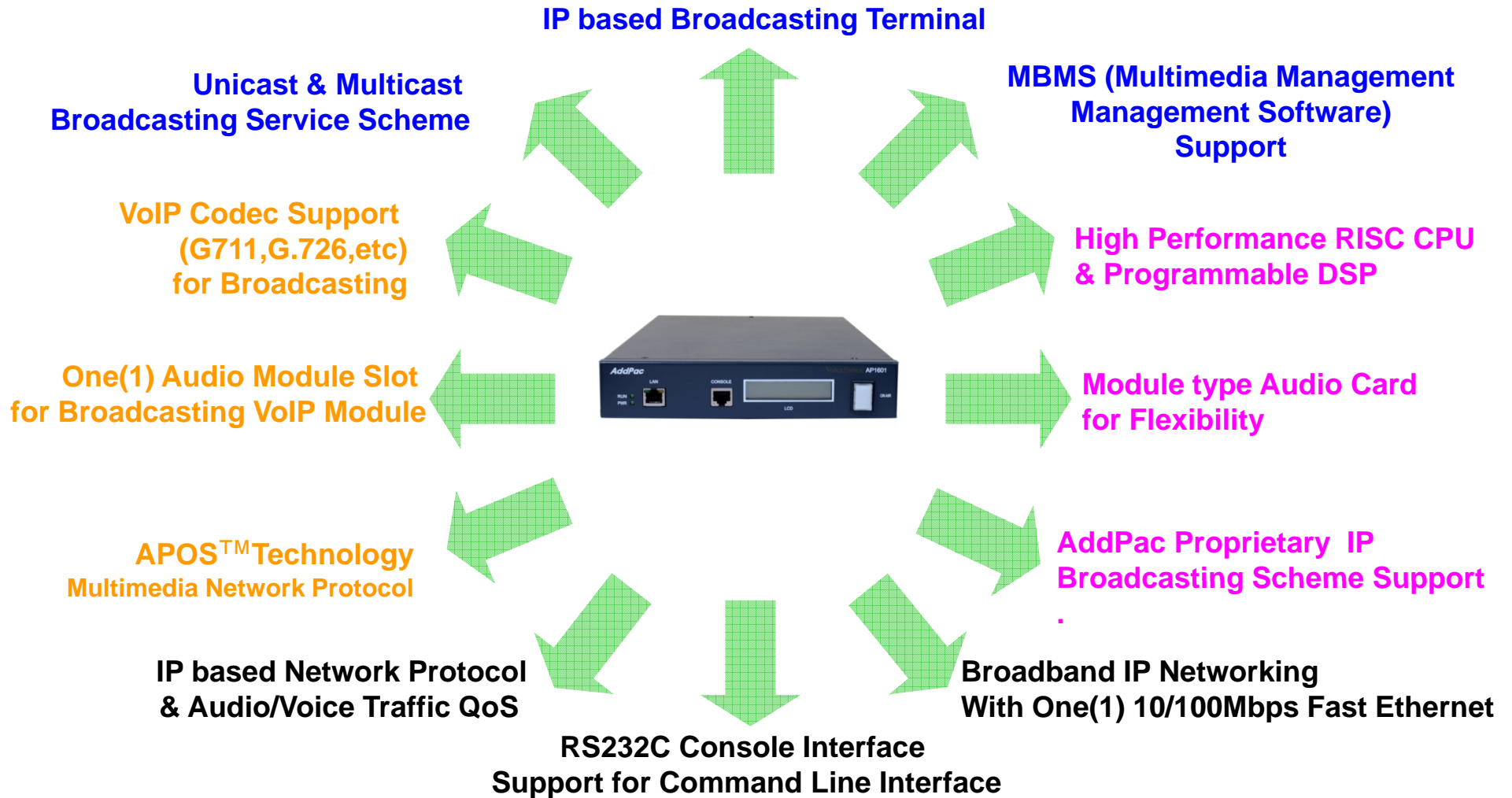
Product Overview

AP1601 IP Voice Broadcasting Terminal

- IP based Audio Broadcasting Terminal Solution (AddPac Proprietary Protocol)
- RTP (Real-time Transport Protocol) Support for Media Transmission
- Hardware Architecture for Audio Broadcasting Terminal Service
- One(1) Module Slot for Audio Encoding & Decoding Service
- Remote Broadcasting Service at terminal side
- VoIP Codec Support (G.711, G.726, etc)
- Unicast and Multicast Broadcasting Scheme
- MBMS (Multimedia Broadcasting Management Software) Support
- Various Audio Broadcasting Module Support
- On-AIR Blue LAMP
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

Product Highlights

AP1601 IP Voice Broadcasting Terminal



Hardware Specification

AP1601 IP Voice 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
- VoIP Audio Encoding/Decoding Service
- ON-AIR Blue LAMP
- One(1) 10/100Mbps Fast Ethernet Interface
- Option Module : AP-AUDIO2
 - Two(2) 3.5mm Audio Input/Output Interface
- Option Module : AP-AUD1S3
 - One(1) 3.5mm Audio Input/Output Interface
 - Three(3) FXS VoIP Interface

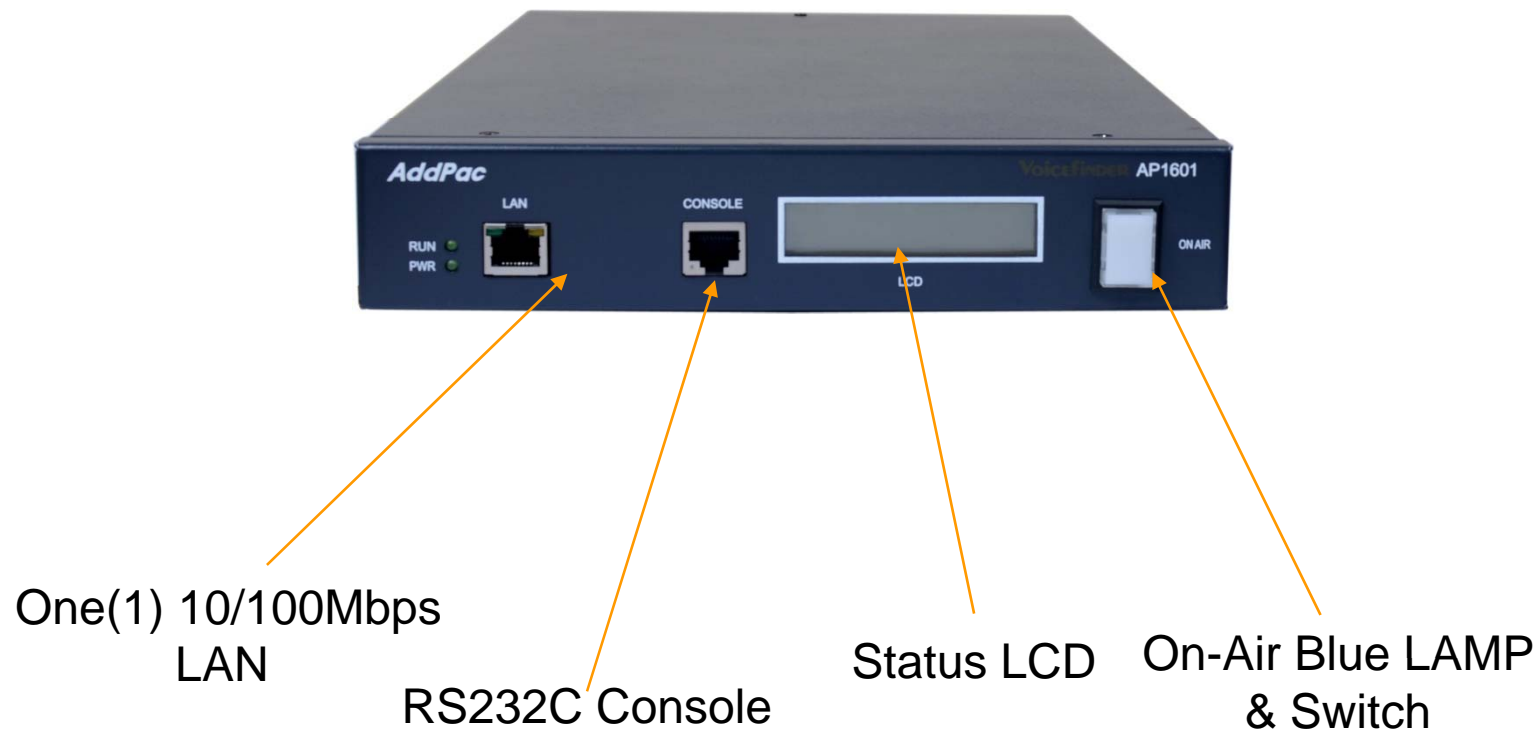
Hardware Specification

AP1601 IP Voice Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1601 Front Side



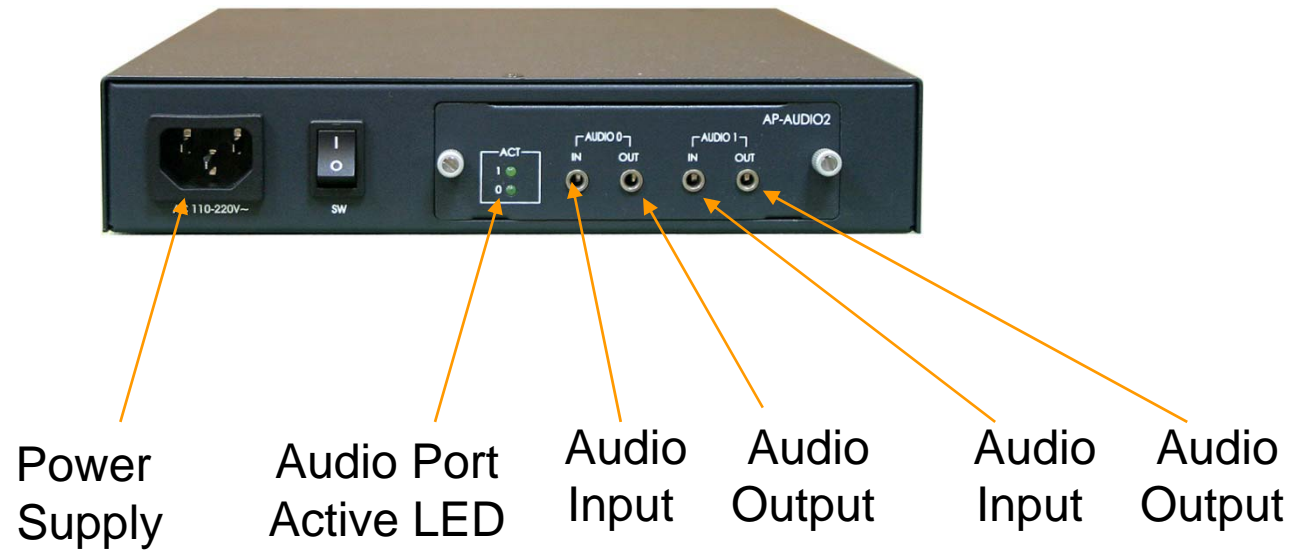
Hardware Specification

AP1601 IP Voice Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1601 Back Side



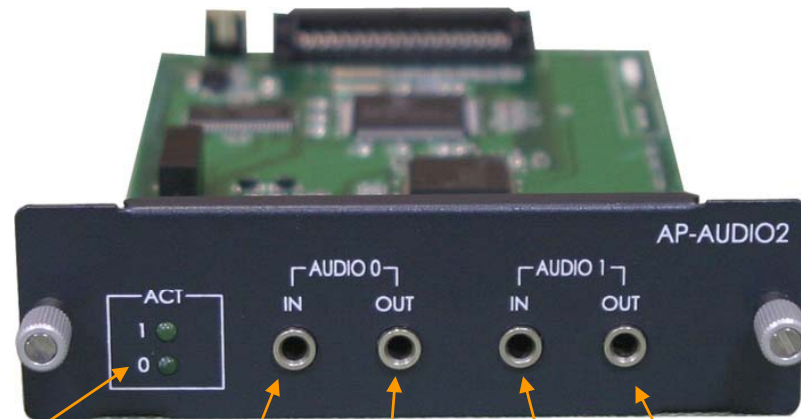
Hardware Specification

AP1601 IP Voice Broadcasting Terminal

RISC
CPU

High-end
DSP

AP-AUDIO2 Board



Audio Port
Active LED

Audio
Input

Audio
Output

Audio
Input

Audio
Output

Audio 0 Channel

Audio 1 Channel

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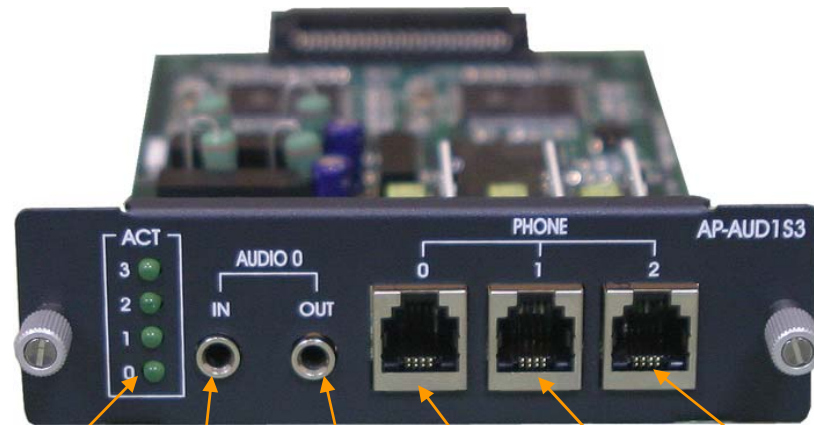
Hardware Specification

AP1601 IP Voice Broadcasting Terminal

RISC
CPU

High-end
DSP

AP-AUD1S3 Board



Audio Port
Active LED

Audio
Input

Audio
Output

FXS
Port 0

FXS
Port 1

FXS
Port 2

Audio 0 Channel

Hardware Specification

AP1601 IP Voice Broadcasting Terminal

RISC
CPU

High-end
DSP

AP1601 Audio Module

Audio Module Type	Audio Module Features
AP-AUDIO2	Two(2)-Channel Audio In/Out Port
	Audio Encoding/Decoding Service
	Audio IN : MIC IN Audio OUT :Line OUT 3.5mm Stereo JACK
	G.711, G.726, G.729A, G.723.1 Audio Codec


Hardware Specification

AP1601 IP Voice Broadcasting Terminal

RISC
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DSP

AP1601 Audio Module

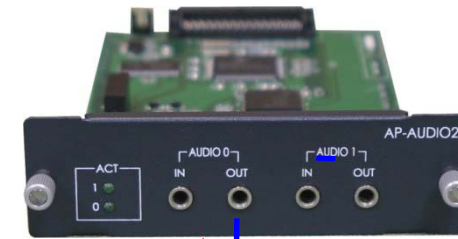
Audio Module Type	Audio Module Features
AP-AUD1S3	One(1)-Channel Audio In/Out Port
	Audio Encoding/Decoding Service
	Audio IN : MIC IN
	Audio OUT :Line OUT 3.5mm Stereo JACK
	Three(3) FXS Port Interface (RJ11 x 3)
	G.711, G.726, G.729A, G.723.1 Audio Codec

AP-AUDIO2 Module

AP1601 IP Voice Broadcasting Terminal

RISC
CPU

High-end
DSP



3.5mm Line Out JACK



- G.7xx Voice codec realizes IP voice broadcasting service
- Real time VoIP Broadcasting Service using RTP (Real-time Transport Protocol) Protocol

Headphone

AddPac

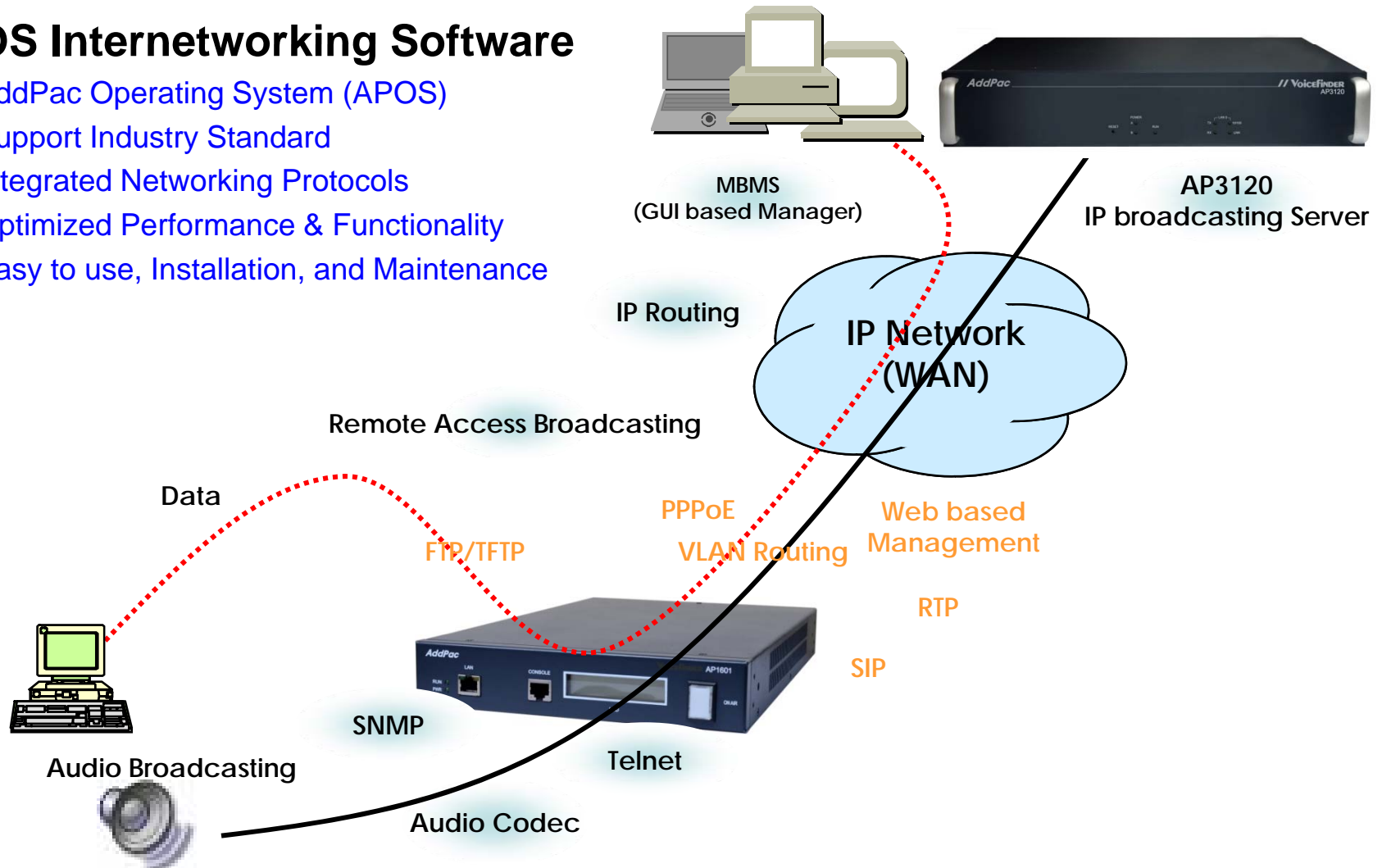
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APOS™ Service Features

AP1601 IP Voice 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

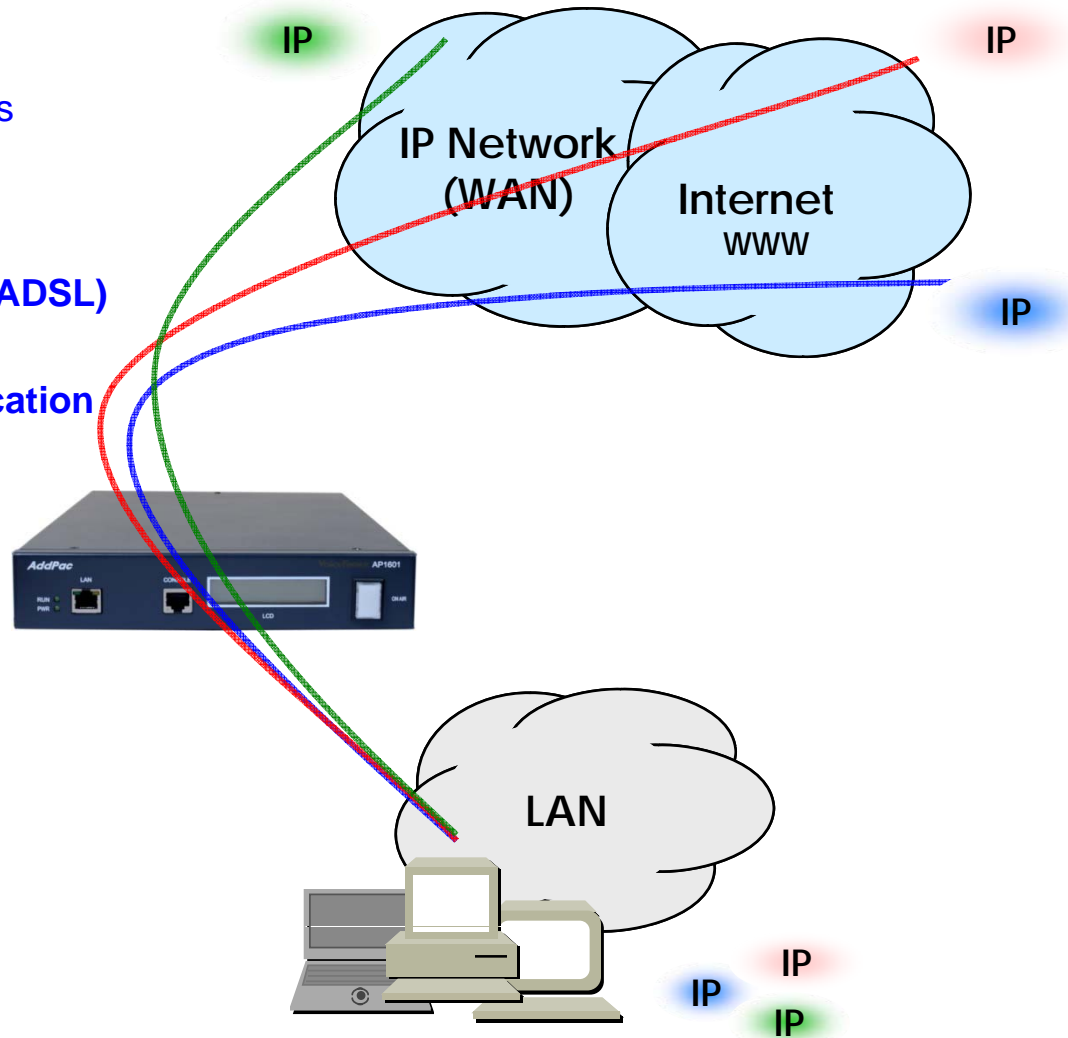
AP1601 IP Voice Broadcasting Terminal

- **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

AP1601 IP Voice 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

AP1601 IP Voice 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

AP1601 IP Voice 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

AP1601 IP Voice Broadcasting Terminal

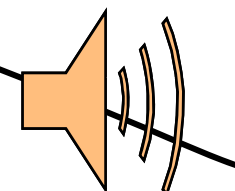
- Voice Codec

- G.711 A-Law, G.711 U-Law
- G.726 r16, G.726 r32
- G.729A
- G.723.1 r63, G.723.1 r53
- VAD (Voice Activity Detection) function support
- DTMF relay support (H.323, SIP, MGCP common) based on RFC2833

- 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

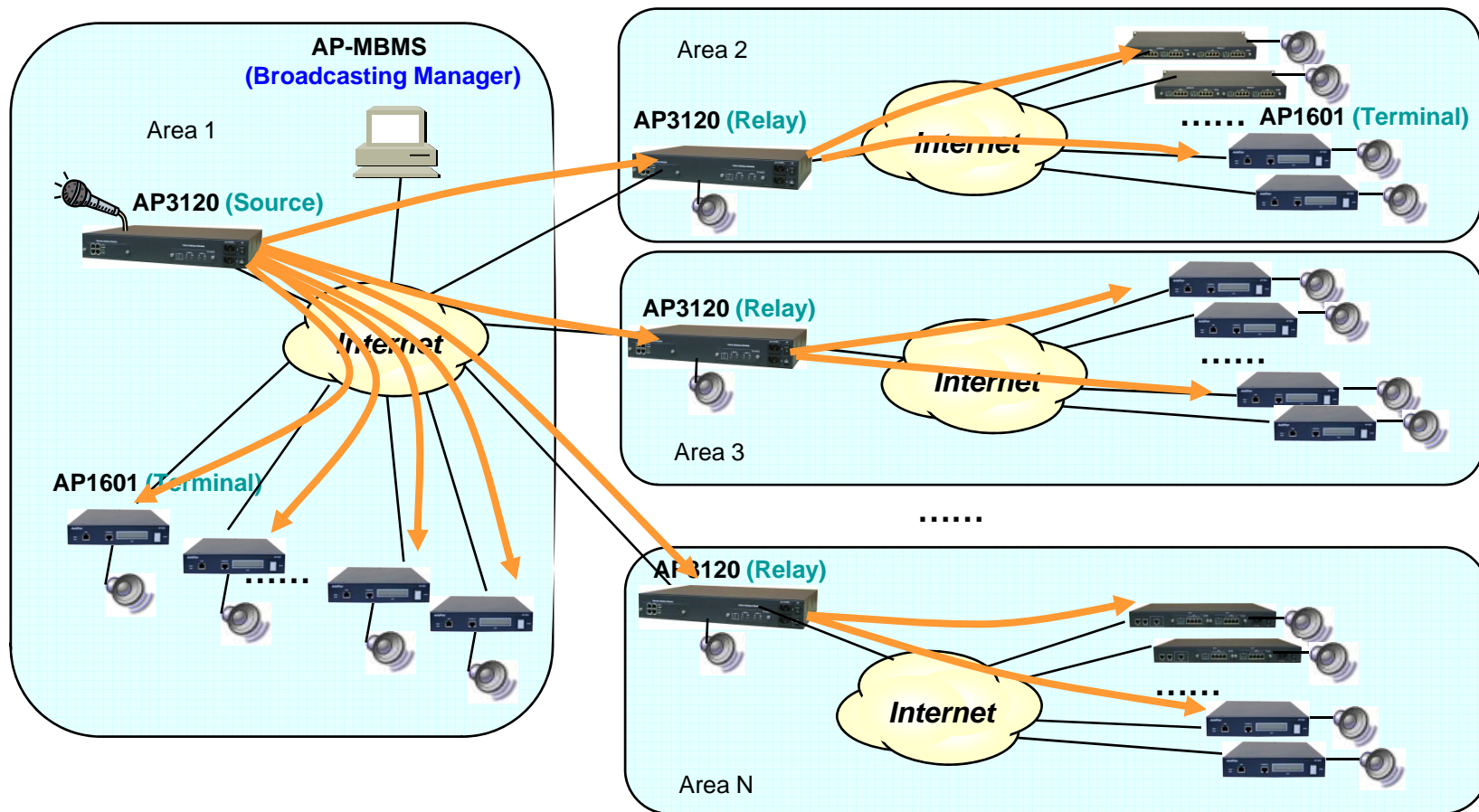
IP Broadcasting



IP Broadcasting Network Diagram

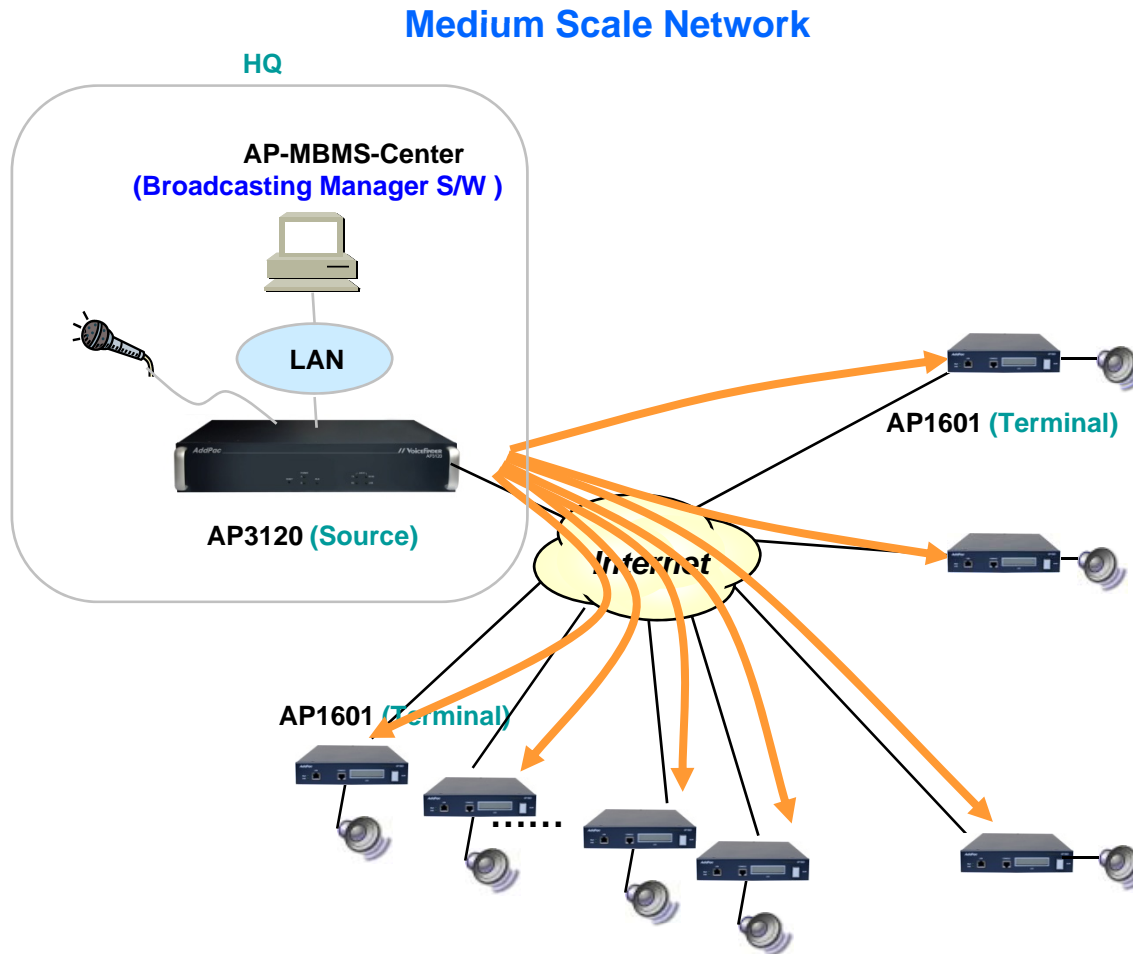
AP1601 IP Voice Broadcasting Terminal

Large Scale Network



IP Broadcasting Network Diagram

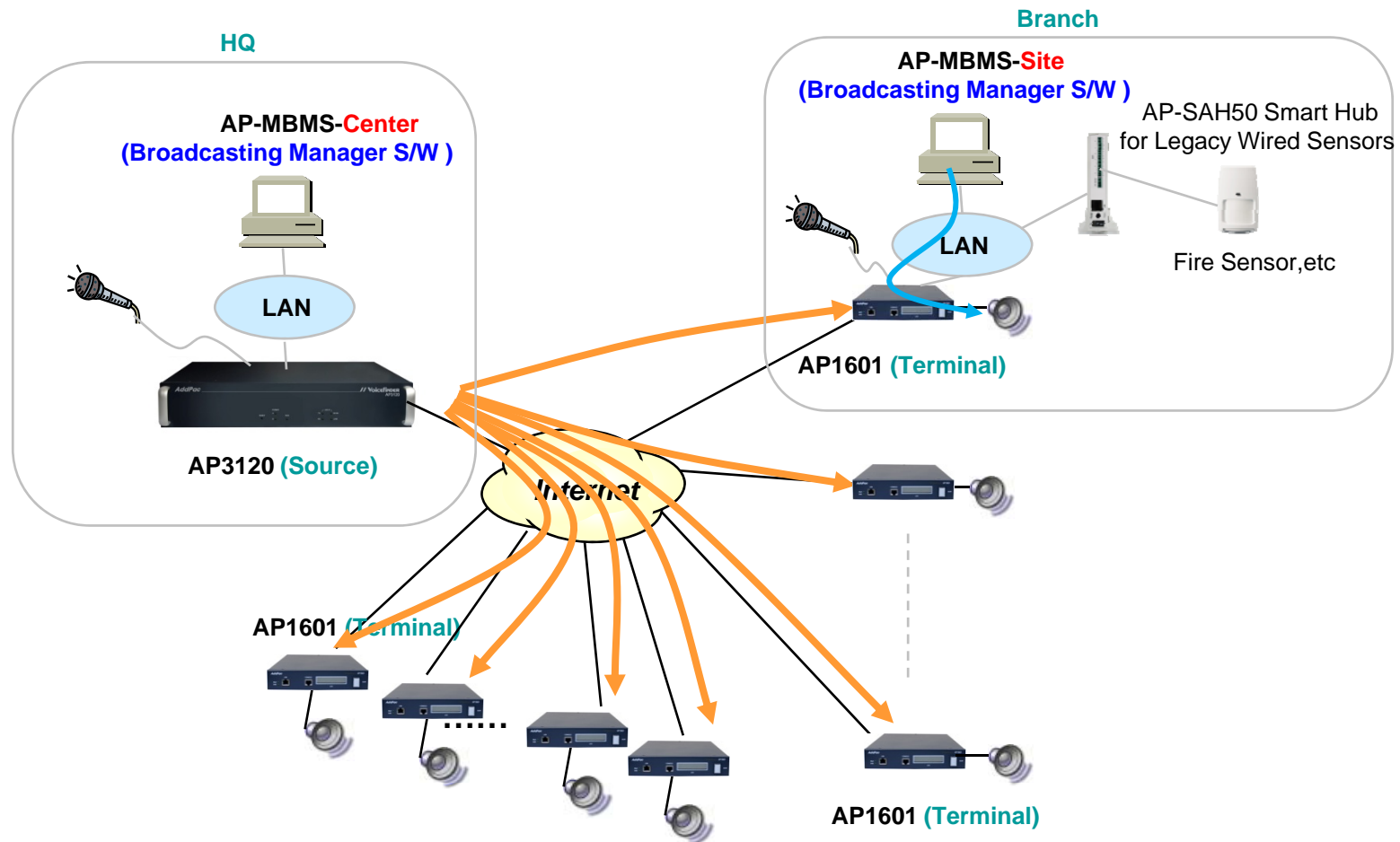
AP1601 IP Voice Broadcasting Terminal



IP Broadcasting Network Diagram

AP1601 IP Voice Broadcasting Terminal

Center Broadcasting + Site Broadcasting + Emergency Broadcasting (fire, etc)



Ordering Information

- **AP1601 IP Voice Broadcasting Terminal Hardware**
 - AP1601 Main Body
 - RISC Microprocessor with High-end Programmable DSP Architecture
 - Option : AP-AUDIO2 Module , AP-AUD1S3 Module
 - Including Network Cable Set & Power Supply, etc.
- **Built-in APOS Internetworking Software for AP1601**
- **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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Sales and Marketing

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