# IP Voice Broadcasting Solution




AddPac

**AddPac Technology**

Sales and Marketing

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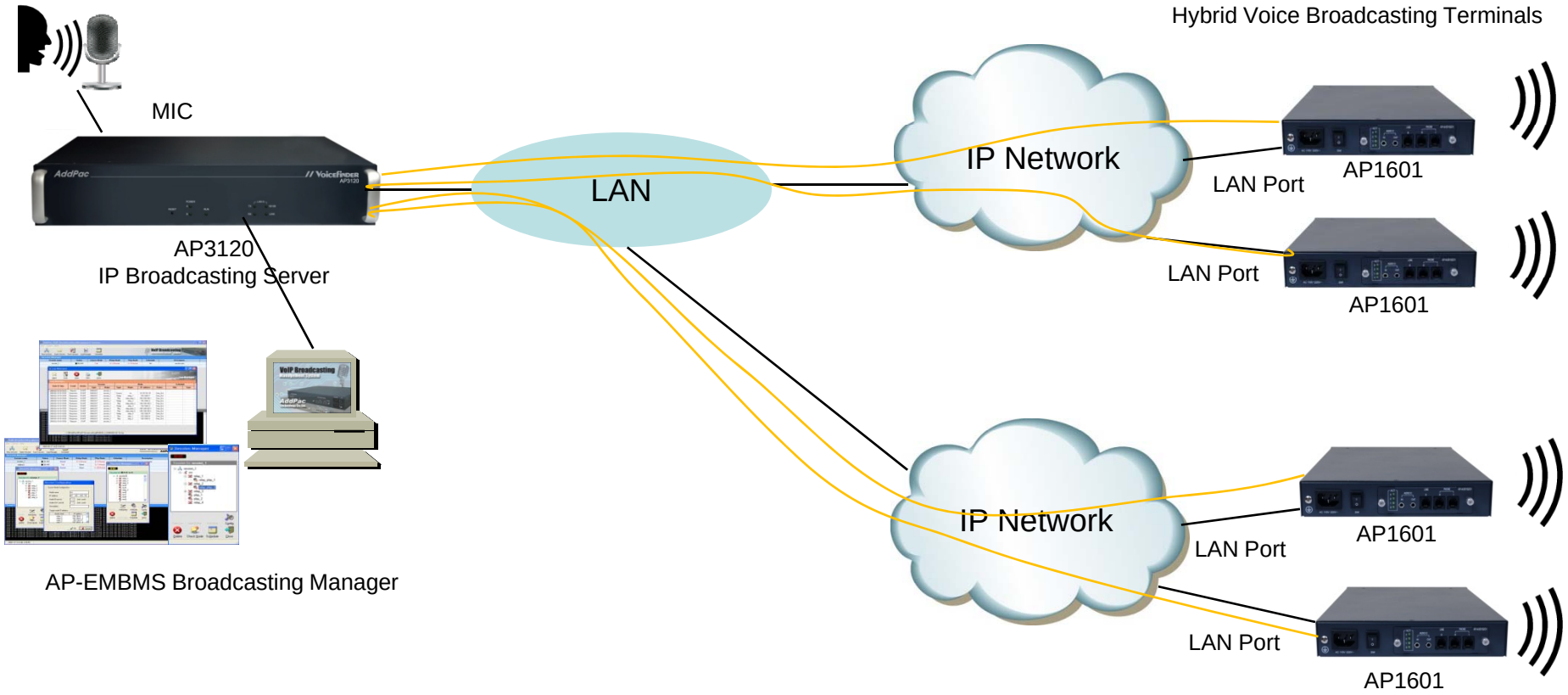
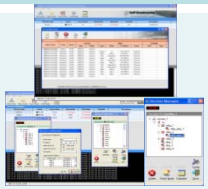
  - Management Software : AP-MBMS

# IP+PSTN Hybrid Voice Broadcasting Service Network Diagram



# IP Voice Broadcasting Product Solution

| Broadcasting Management S/W | IP Broadcasting Server | IP Voice Broadcasting Terminal | AMP On/Off IP Control Device |
|---|---|---|---|
|  |  |  |  |
| AP-MBMS | AP3120 | AP1601/ AP1602 | AP-PSB |
| | |  | |

# IP Voice Broadcasting Server
# AP3120

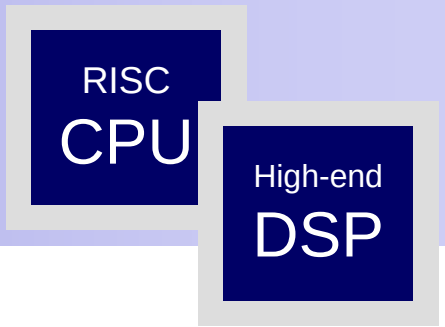
# Product Overview

## AP3102 IP Voice Broadcasting Server

- IP based Voice Broadcasting Server Solution
- RTP (Real-time Transport Protocol) Support for Media Transmission
- Hardware Architecture for IP Voice Broadcasting Service
- One(1) Module Slot for Audio Encoding & Decoding Service
- VoIP Codec Support (G.711, G.726, etc)
- Unicast and Multicast Broadcasting Scheme
- Enhanced MBMS (Multimedia Broadcasting Management System) Support
- MBMS (Broadcastng Management Software) Support
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability
- Dual Power Supply for Power Duplication

# Hardware Specification

## AP3102 IP Voice Broadcasting Server




- RISC Microprocessor Computing Power
- High-end Programmable DSP Hardware Architecture
- One(1) Module Slot for Audio Broadcasting Codec Module
- One(1) Module Slot for Network Interface
- VoIP Audio Encoding/Decoding Service
- Two(2) 10/100Mbps Fast Ethernet Interface
- Option Module : AP-AUDIO2
  - Two(2) 3.5mm Audio Input/Output Interface
- Internal Dual Power Supply

# Hardware Specification

AP3102 IP Voice Broadcasting Server

RISC CPU

High-end DSP

## Front Side




Power Status LED

LAN Status LED

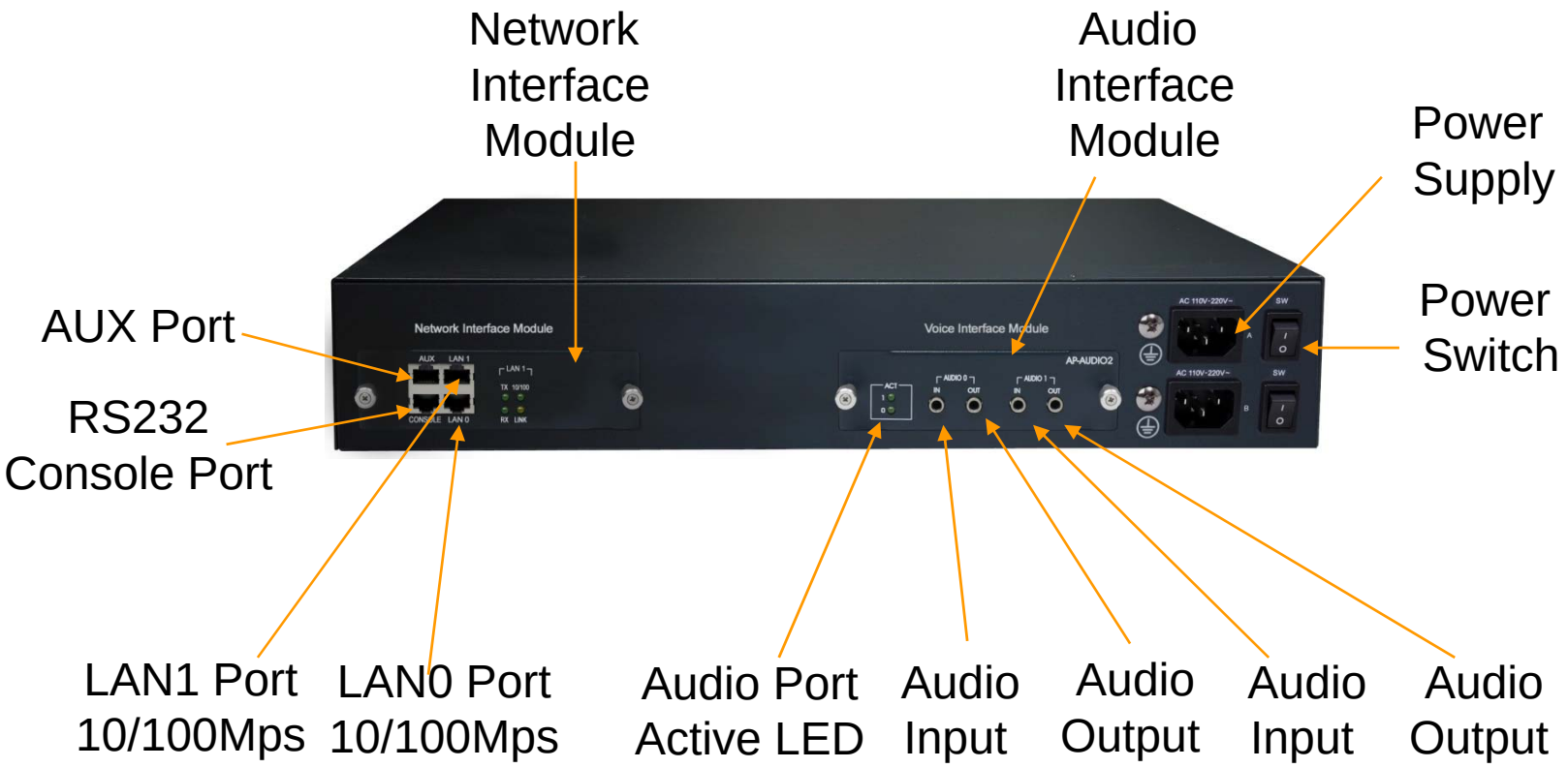
# Hardware Specification

AP3102 IP Voice Broadcasting Server

RISC CPU

High-end DSP

## Back Side



# IP+PSTN Hybrid Voice Terminals

# AP1602

## IP+PSTN Hybrid Voice Broadcasting Terminal



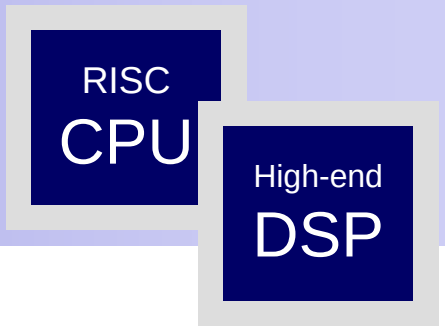
# Product Overview

## AP1602 Hybrid Voice Broadcasting Terminal

- IP + PSTN Hybrid Voice Broadcasting Terminal Solution
- RTP (Real-time Transport Protocol) Support for Media Transmission
- IP based Audio Broadcasting Terminal Solution (AddPac Proprietary Protocol)
- PSTN Voice Broadcasting Terminal Service Solution
- 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 (Broadcastng Management Software) Support
- Various Audio Broadcasting Module Support
- On-AIR Blue LAMP
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

# Hardware Specification

## AP1602 Hybrid Voice Broadcasting Terminal




- 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
- Two(2) 10/100Mbps Fast Ethernet Interface
- Option Module : AP-AUDIO2
  - Two(2) 3.5mm Audio Input/Output Interface
- Option Module : AP-AUD1S2O1
  - One(1) 3.5mm Audio Input/Output Interface
  - Two(2) FXS PSTN Analog Interface
  - One(1) FXO PSTN Analog Interface

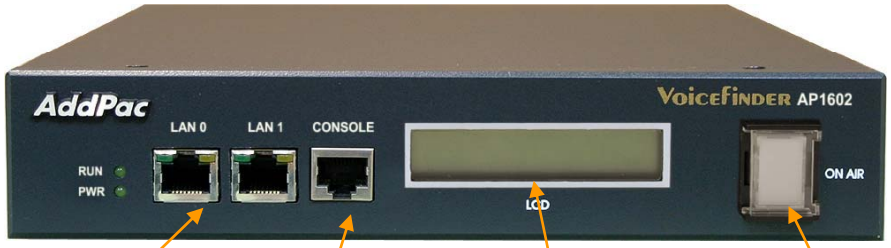
# Hardware Specification

AP1602 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1602 Front Side




Two(2) 10/100Mbps LAN

RS232C Console

Status LCD

On-Air Blue LAMP & Switch

# Hardware Specification

AP1602 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1602 Back Side




Power Supply

Audio Port Active LED

Audio Input

Audio Output

Audio Input

Audio Output

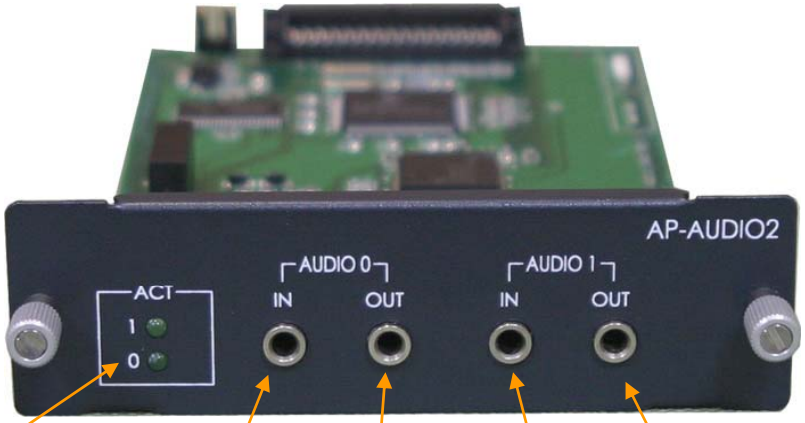
# Hardware Specification

AP1602 Hybrid 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

# Hardware Specification

AP1602 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP-AUD1S2O1 Board




Audio Port Active LED

Audio Input

Audio Output

Audio 0 Channel

LINE Port 0

FXS Port 1

FXS Port 2

# Hardware Specification

AP1602 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1602 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<br>Audio OUT :Line OUT<br>3.5mm Stereo JACK |
| | G.711, G.726, G.729A, G.723.1 Audio Codec |

# Hardware Specification

AP1602 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1602 Audio Module

| Audio Module Type | Audio Module Features |
|---|---|
| AP-AUD1S2O1  | One(1)-Channel Audio In/Out Port |
| | Audio Encoding/Decoding Service |
| | Audio IN : MIC IN<br>Audio OUT :Line OUT |
| | 3.5mm Stereo JACK |
| | Two(2) FXS Port Interface (RJ11 x 2) |
| | One(1) FXO Port Interface (RJ11 x 1) |
| | G.711, G.726, G.729A, G.723.1 Audio Codec |

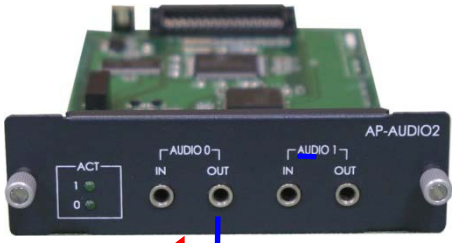
# AP-AUDIO2 Module

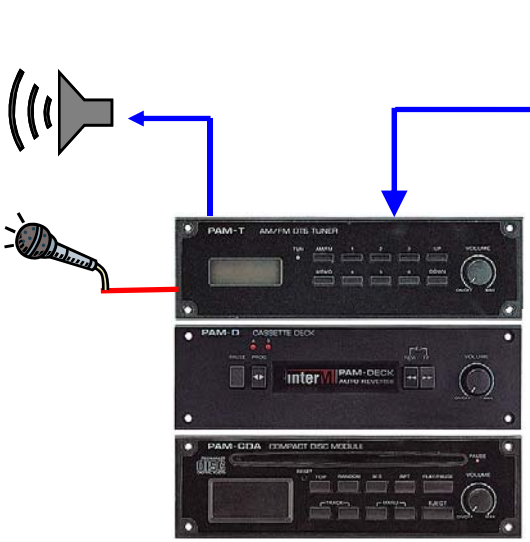
## AP1602 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP




3.5mm Line Out JACK

Direct MIC

Headphone

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

# AP1601

## IP+PSTN Hybrid Voice Broadcasting Terminal



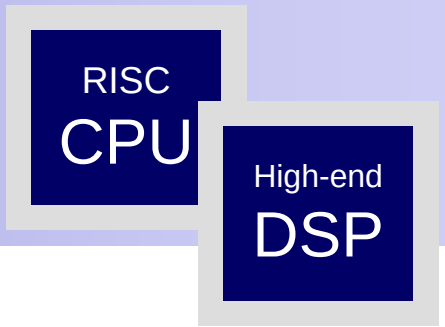
# Product Overview

## AP1601 Hybrid Voice Broadcasting Terminal

- IP + PSTN Hybrid Voice Broadcasting Terminal Solution
- RTP (Real-time Transport Protocol) Support for Media Transmission
- IP based Audio Broadcasting Terminal Solution (AddPac Proprietary Protocol)
- PSTN Voice Broadcasting Terminal Service Solution
- 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 (Broadcastng Management Software) Support
- Various Audio Broadcasting Module Support
- On-AIR LAMP
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

# Hardware Specification

## AP1602 Hybrid Voice Broadcasting Terminal




- 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 LAMP
- One(1) 10/100Mbps Fast Ethernet Interface
- Option Module : AP-AUDIO2
  - Two(2) 3.5mm Audio Input/Output Interface
- Option Module : AP-AUD1S2O1
  - One(1) 3.5mm Audio Input/Output Interface
  - Two(2) FXS PSTN Analog Interface
  - One(1) FXO PSTN Analog Interface

# Hardware Specification

AP1601 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1601 Front Side




One(1) 10/100Mbps LAN

RS232C Console

Status LCD

On-Air LAMP

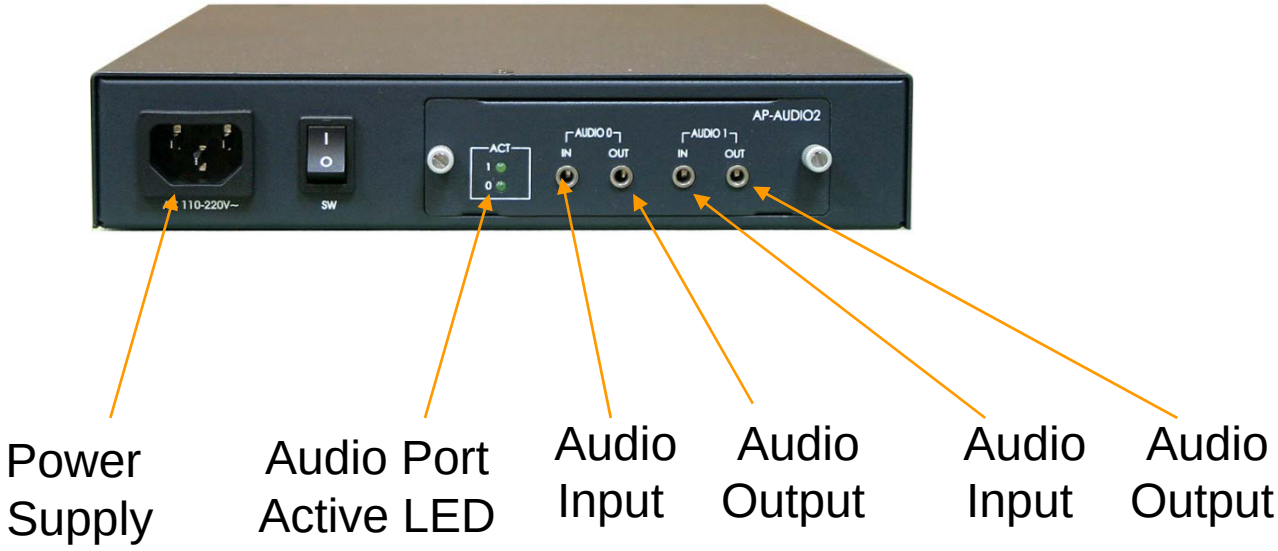
# Hardware Specification

AP1601 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1601 Back Side



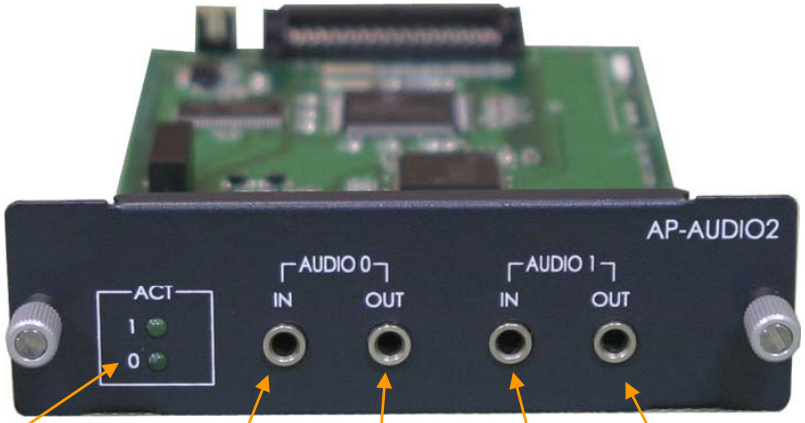
# Hardware Specification

AP1601 Hybrid 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

# Hardware Specification

AP1601 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP-AUD1S2O1 Board




Audio Port Active LED

Audio Input

Audio Output

Audio 0 Channel

LINE Port 0

FXS Port 1

FXS Port 2

# Hardware Specification

AP1601 Hybrid 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<br>Audio OUT :Line OUT<br>3.5mm Stereo JACK |
| | G.711, G.726, G.729A, G.723.1 Audio Codec |

# Hardware Specification

AP1601 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP

## AP1601 Audio Module

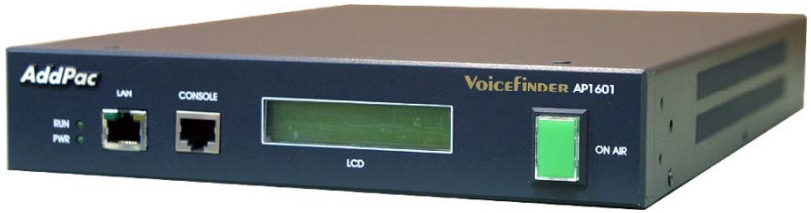
| Audio Module Type | Audio Module Features |
|---|---|
| AP-AUD1S2O1  | One(1)-Channel Audio In/Out Port |
| | Audio Encoding/Decoding Service |
| | Audio IN : MIC IN<br>Audio OUT :Line OUT |
| | 3.5mm Stereo JACK |
| | Two(2) FXS Port Interface (RJ11 x 2) |
| | One(1) FXO Port Interface (RJ11 x 1) |
| | G.711, G.726, G.729A, G.723.1 Audio Codec |

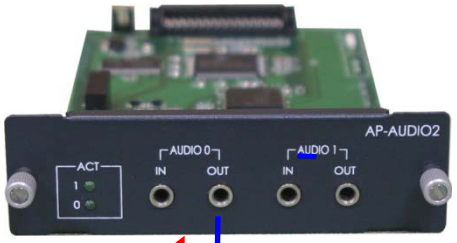
# AP-AUDIO2 Module

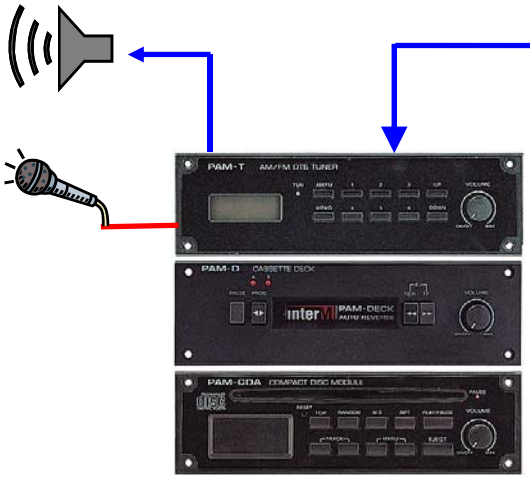
## AP1601 Hybrid Voice Broadcasting Terminal

RISC CPU

High-end DSP




3.5mm Line Out JACK

Direct MIC

Headphone

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

# AP-PSB

## Power Switching Box

### Remote Amplifier Power On/Off Controller



# Product Overview

## AP-PSB Power Switching Box

- Remote Amplifier Power ON/OFF Controller
- Remove the Background Noise When Mode is not ON-AIR state
- Master(AP1601)-Slave(AP-PSB) based Architecture
- AddPac IP based Voice Broadcasting Total Solution
- Module Type DC, AC based Power On/Off Control
- RS232 or LAN Interface for Command interface between AP1601(terminal) and AP-PSB
- Firmware Upgradeable Architecture(FTP, TFTP)
- Broadcasting Solution with Outstanding Network Service Capability

# Hardware Specification

## AP-PSB Power Switching Box




- RISC Microprocessor Computing Power
- Module Slots for Power On/Off Control Module
- Power Control Interface
  - DC Input, DC Output
  - AC Input, AC Output (Option)
- Network Interface for Command Control
  - One(1) 10/100Mbps Fast Ethernet (RJ45)
  - One(1) RS-232C Interface (RJ45)

# Hardware Specification

## AP-PSB Power Switching Box

RISC CPU

### Front Side




Power LED

Blank Slot
for AC Input

On-AIR Lamp

RS232 Interface
(RJ45)

LAN Interface
(RJ45)

# Hardware Specification

## AP-PSB Power Switching Box

RISC CPU

### Back Side




Power Input

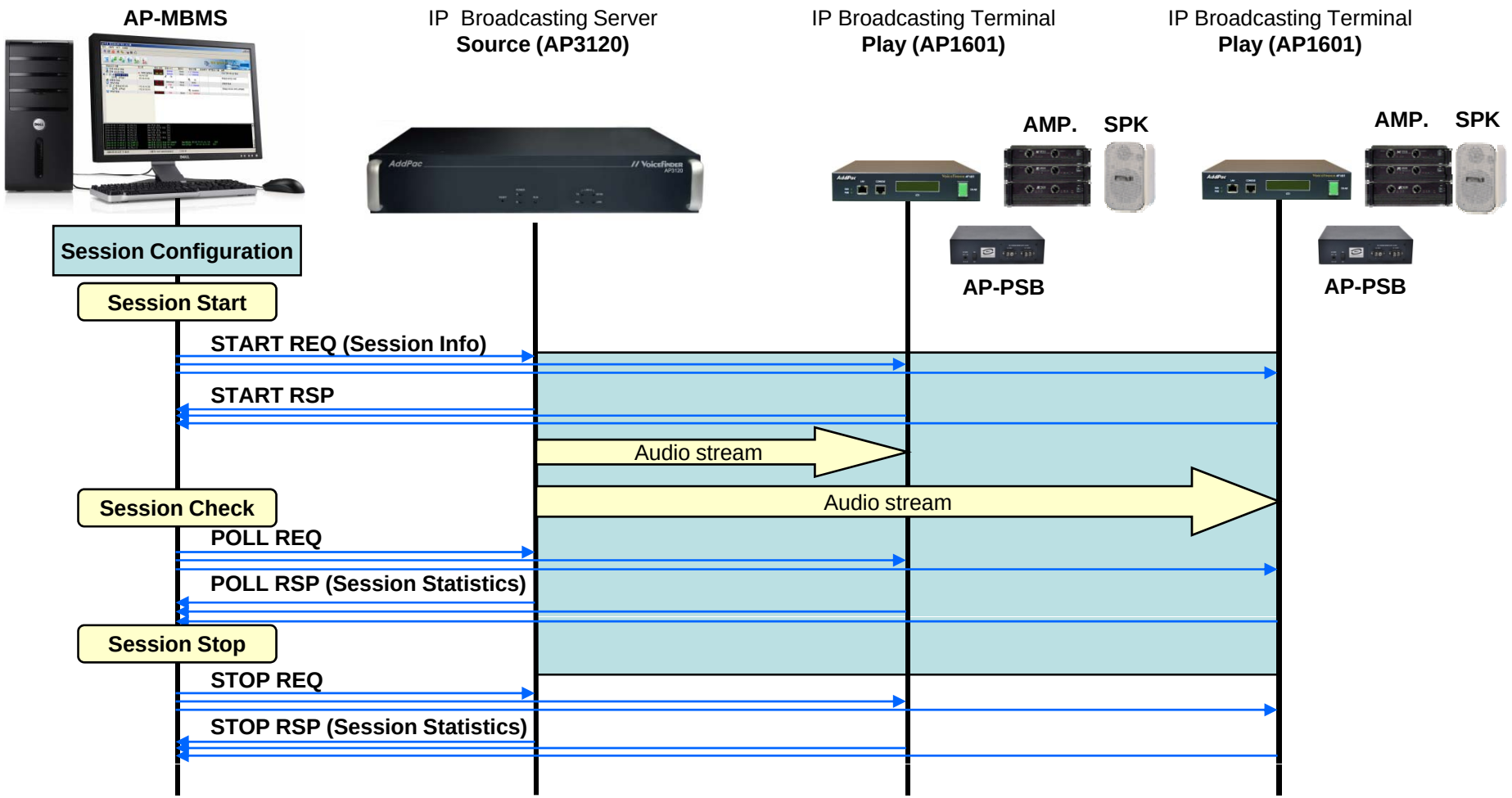
Power ON/OFF Switch

AMP. Power Input

AMP. Power Output

# IP Broadcasting Signal Flow

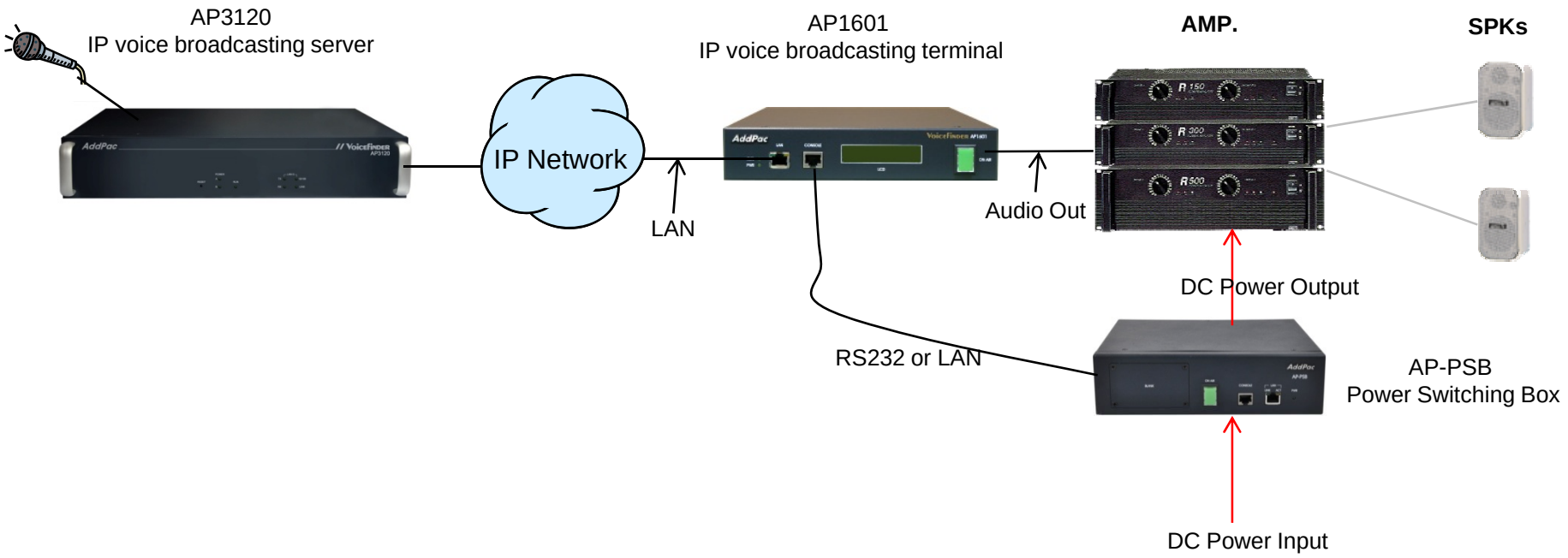
## AP-PSB Power Switching Box



# PSB Power Control Diagram

AP-PSB Power Switching Box

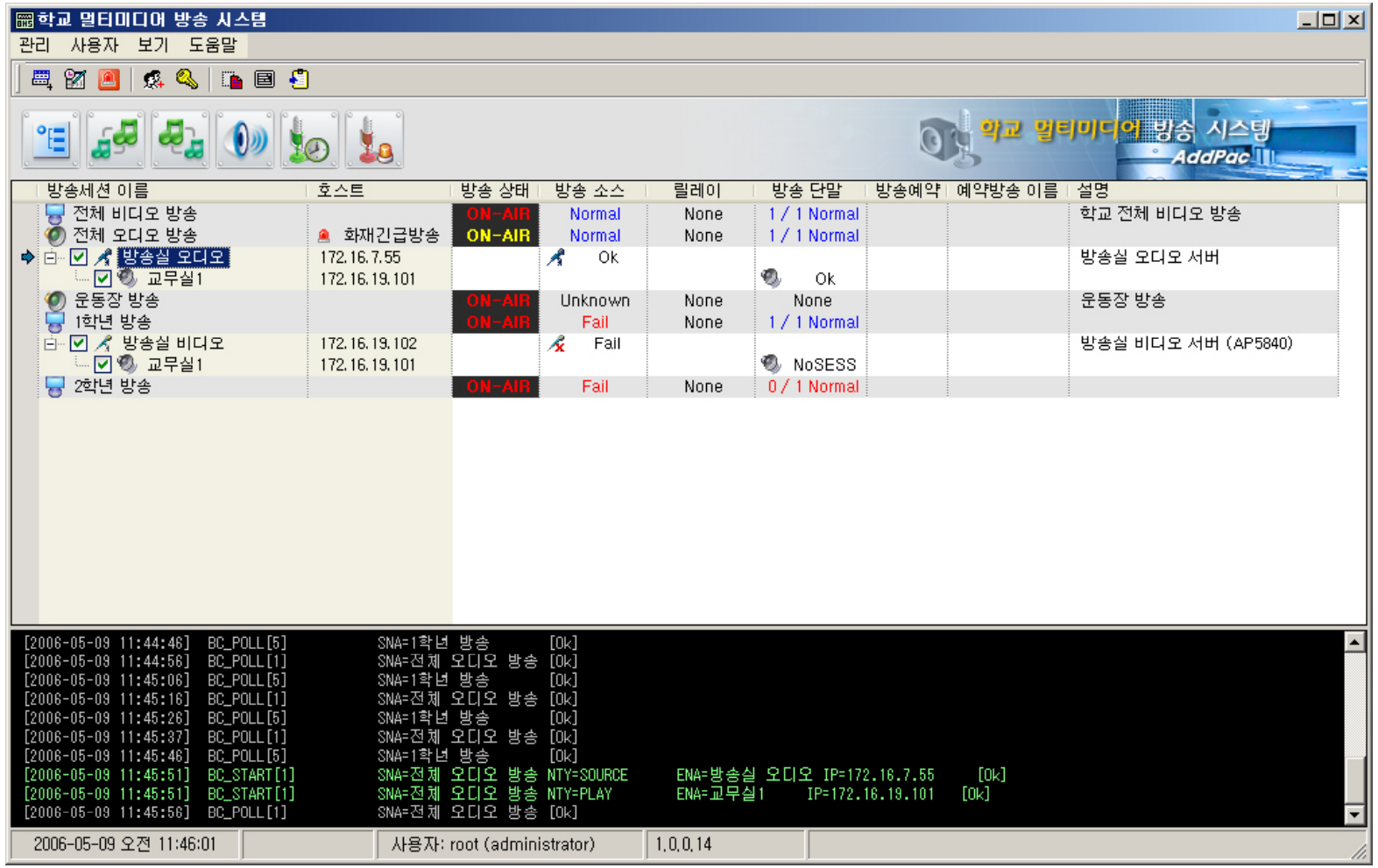
## PSB Power Control Diagram



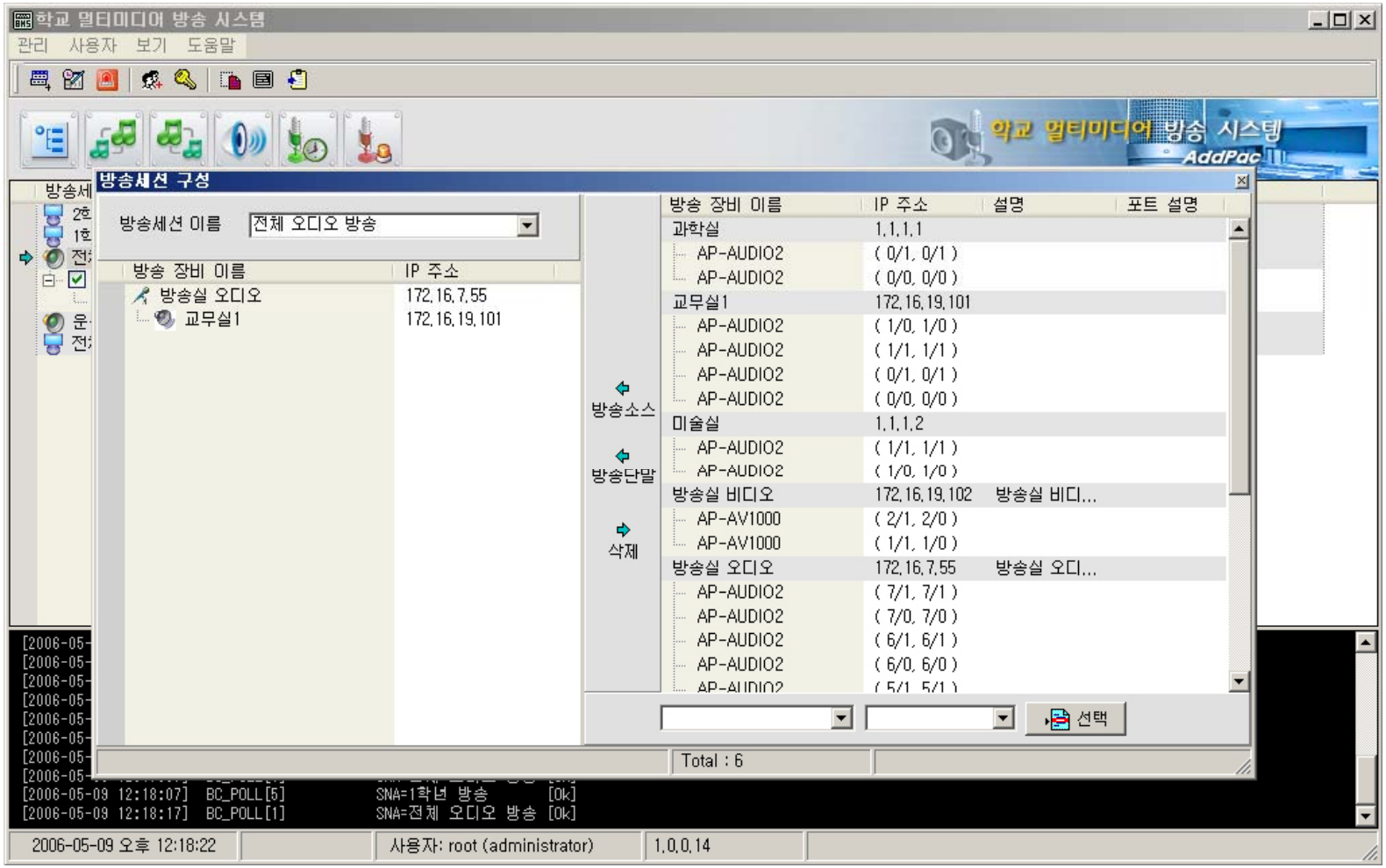
# MBMS (Multimedia Broadcasting Management System) 2.0



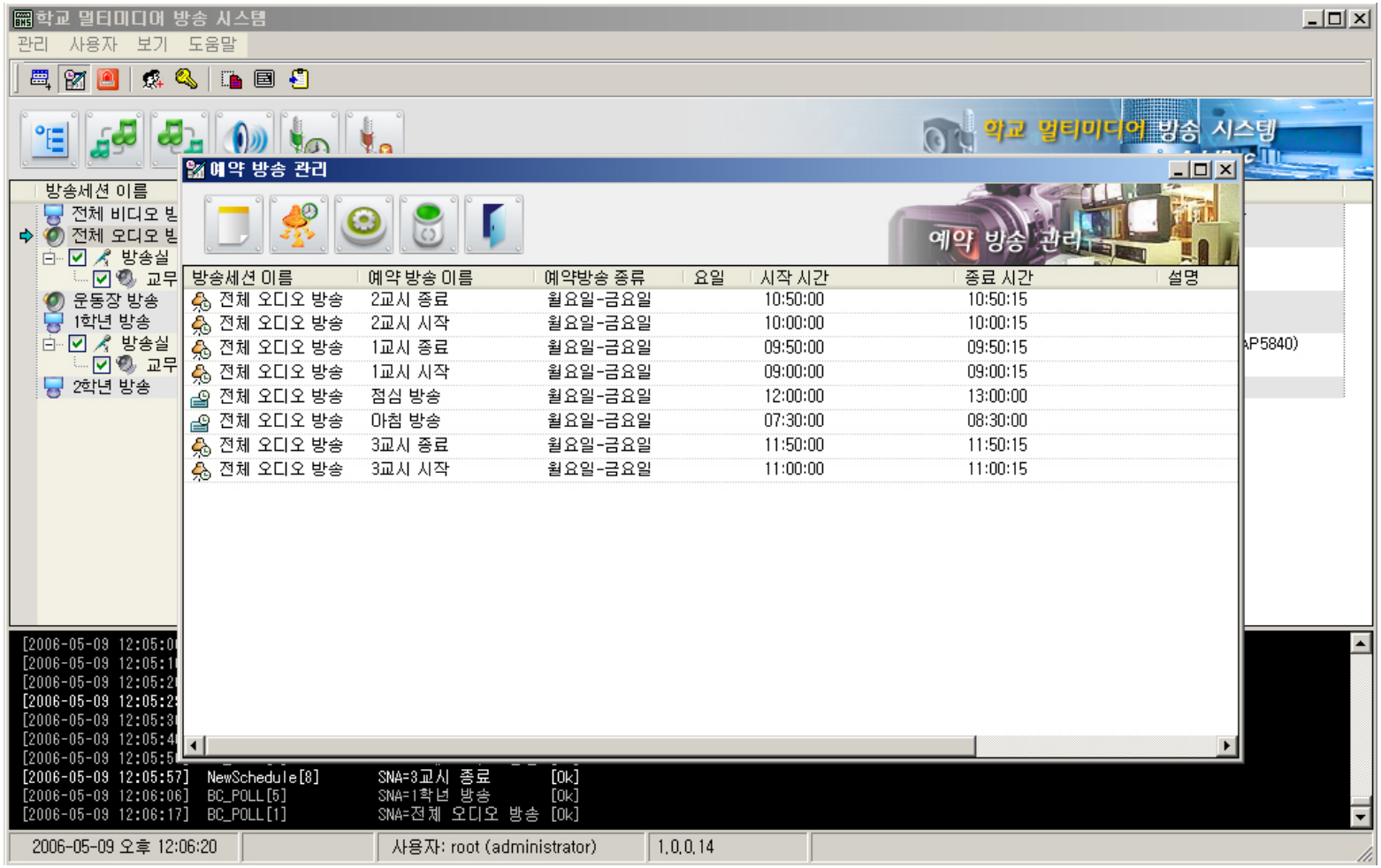
# MBMS S/W Startup (Example)



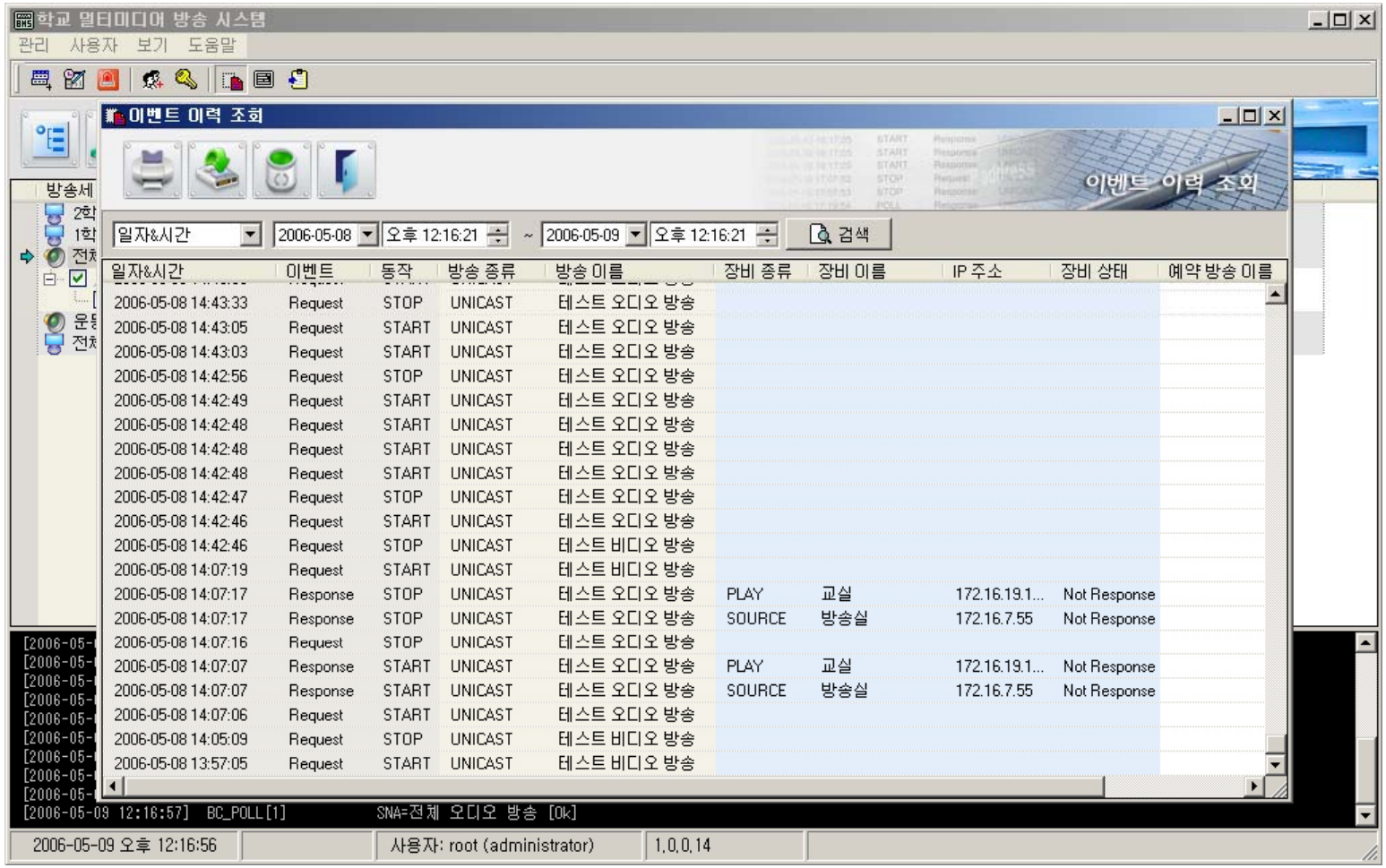
# Broadcasting Equipment Management (Example)



# Broadcasting Scheduling (Example)



# Event Log (Example)



# Thank you!

**AddPac Technology Co., Ltd.**
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