IP Audio Broadcasting Solution

AddPac Technology

2011, Sales and Marketing

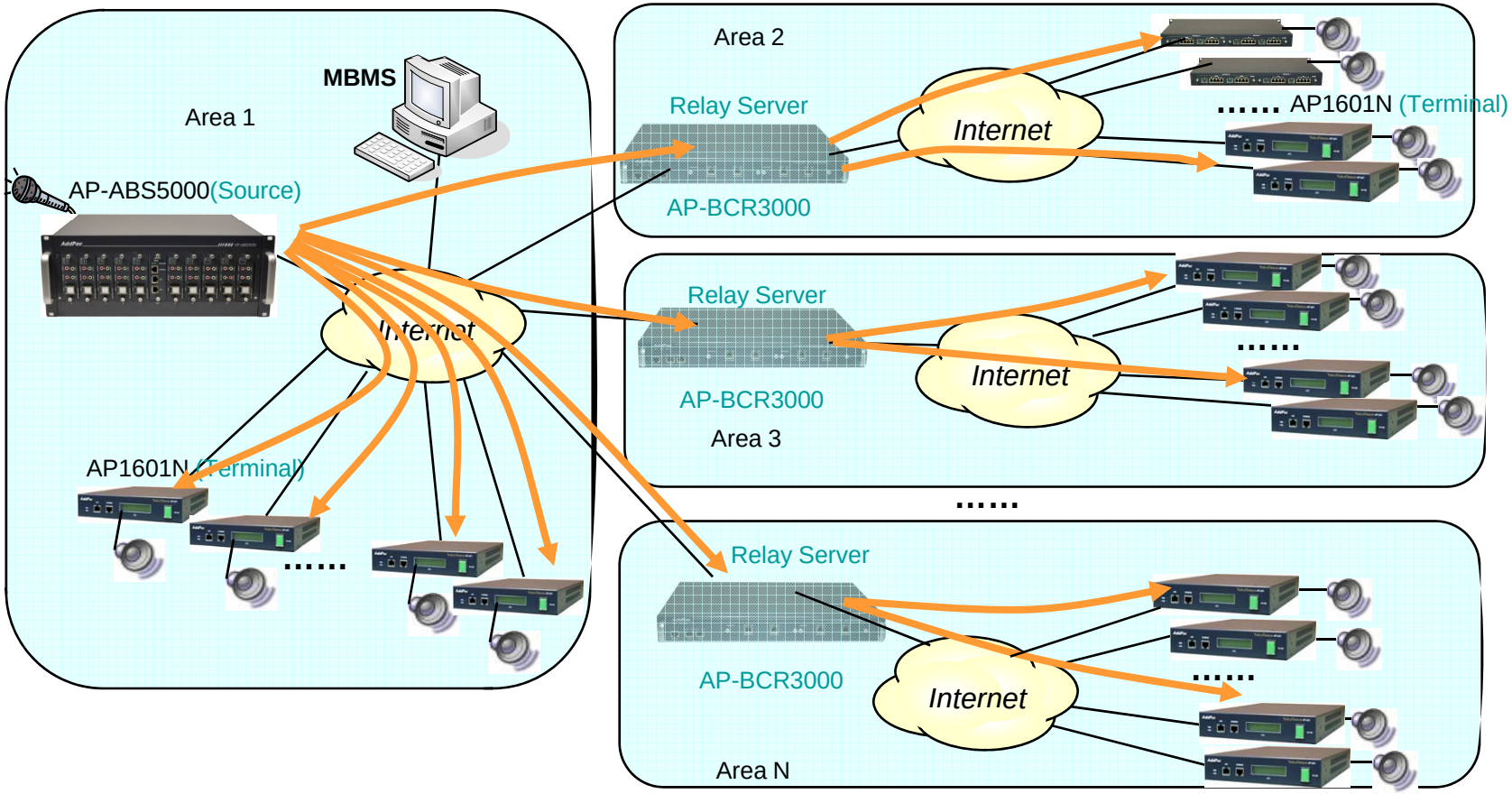
www.addpac.com

Contents

- IP High Quality Audio Broadcasting Service Diagram
  - Unicast Method
  - Multicast Method
- IP High Quality Audio Broadcasting Solution
- Product Specifications
  - IP High Quality Audio Broadcasting Server : AP-ABS5000
  - Broadcasting Router : AP-BCR3000
  - IP Audio Broadcasting Terminal : AP1601N, AP1605
  - MBMS(Multimedia Broadcasting Management System) 2.0

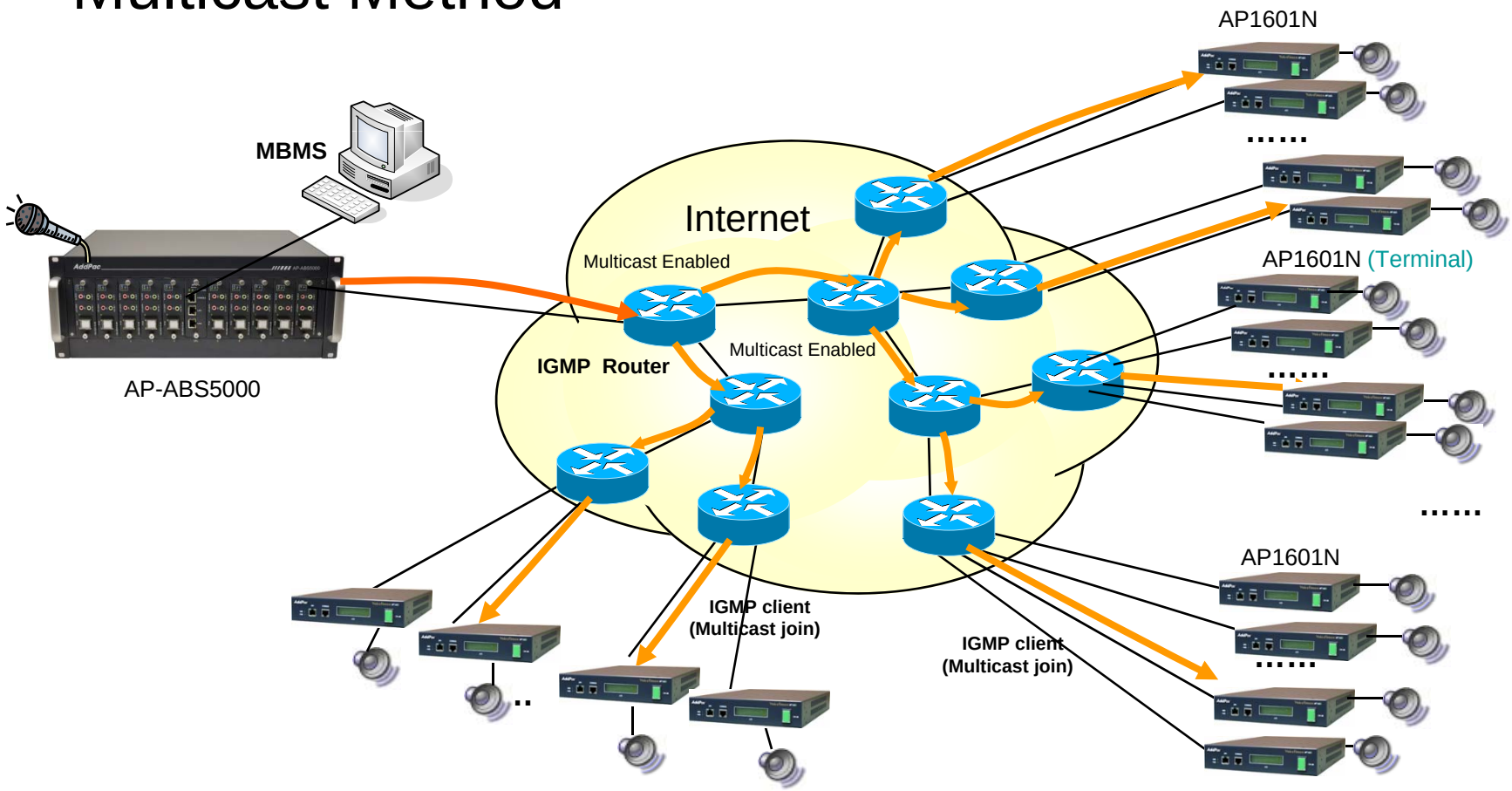
IP Audio Broadcasting Network Service Diagram

Unicast Method



IP Audio Broadcasting Network Service Diagram

Multicast Method



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

IP HQ Audio Broadcasting Solution

Audio Broadcasting Manager S/W	HQ Audio Broadcasting Server AP-ABS5000	Audio Broadcasting Router (Relay Server)	HQ Audio Broadcasting Terminal AP1605A
			
Window based Audio Broadcasting Management Software.	Embedded Hardware based Audio Codec. Ten(10) HQ Audio Codec Module. MP3,G.711 Audio Codec.	1:N Audio Broadcasting Router. Gigabit Ethernet Support	Embedded Hardware based Audio Terminal. Volume Control Rotary Switch. One(1) HQ Audio Codec Module. Built-in AMP. MP3, G.711,Audio Codec.

AP-ABS5000
IP High Quality Audio Broadcasting Server

Main Features

AP-ABS5000 IP High Quality Audio Broadcasting Server

- IP based Audio Broadcasting Solution
- Hardware Architecture for Multichannel Audio Broadcasting Service
- Ten(10) Module Slots for Multichannel Audio Encoding Service
- High Quality Audio Codec Support (MP3, G.711)
- Unicast and Multicast Broadcasting Scheme
- Enhanced MBMS (Multimedia Broadcasting Management System) Support
- Multichannel Audio IN/OUT Port
- High-Quality Audio/Voice Service
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability
- Module based Power Supply
- Dual Power Supply for Power Duplication

Hardware Specification

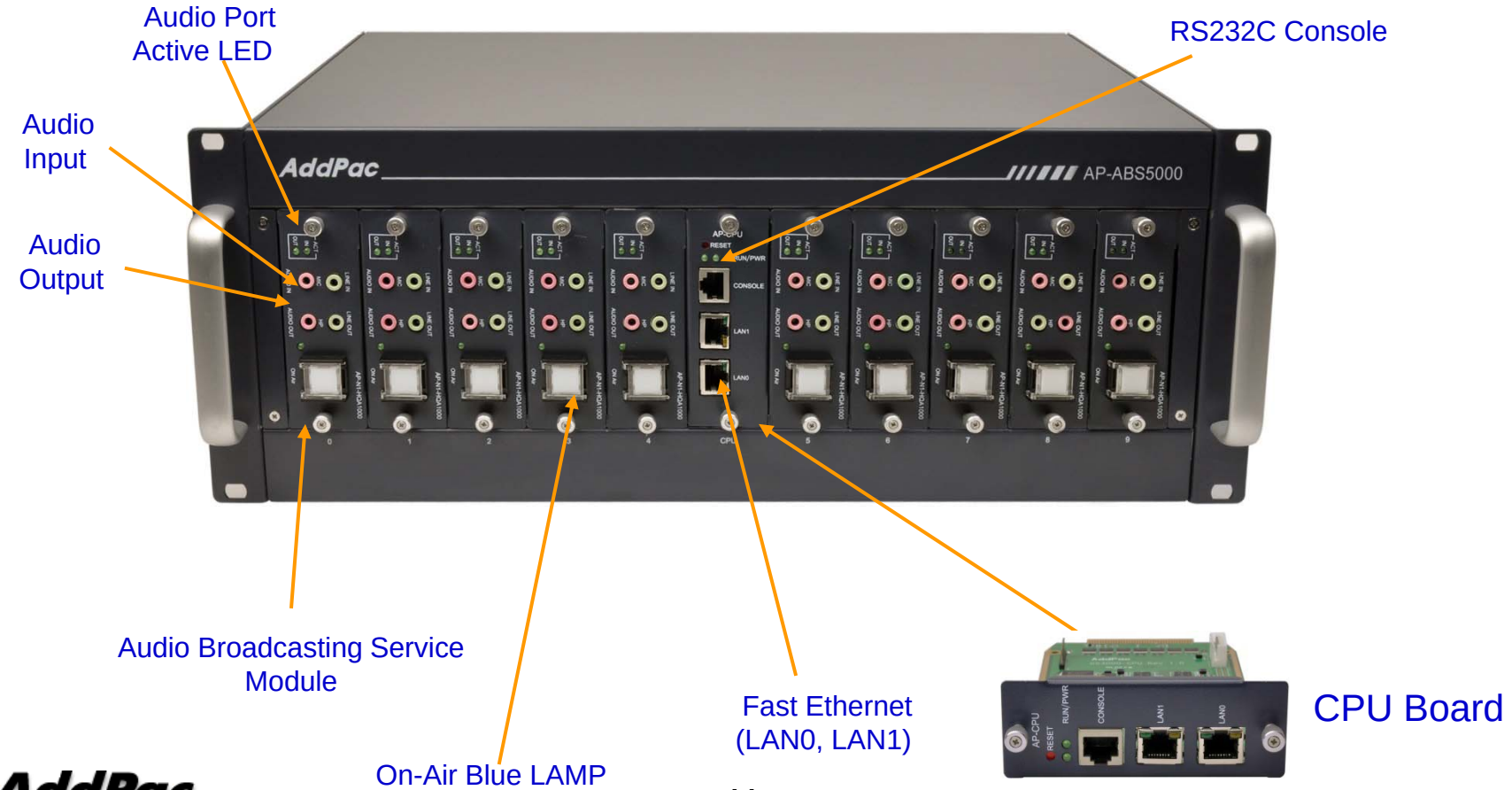
AP-ABS5000 IP High Quality Audio Broadcasting Server

- RISC Microprocessor Computing Power
- High-end Programmable DSP Hardware Architecture
- Ten(10) Module Slots for Audio Broadcasting Codec Module
- Module Type Dual Power Supply
- High quality Audio and Voice Interface
  - Stereo Audio Input Connector
  - Stereo Audio Output Connector
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet (RJ45)
  - One(1) RS-232C Interface (RJ45) for Command Line Interface

Hardware Specification

AP-ABS5000 IP High Quality Audio Broadcasting Server

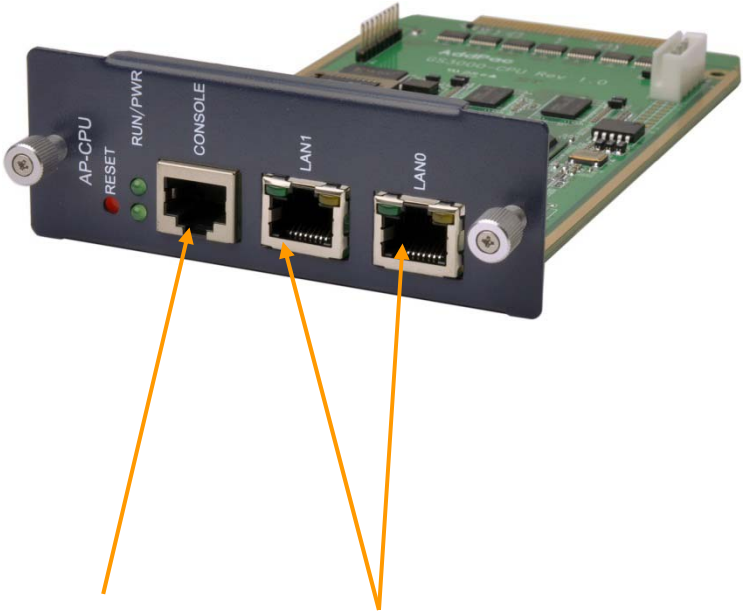
AP-ABS5000 Front Side



Hardware Specification

AP-ABS5000 IP High Quality Audio Broadcasting Server

AP-CPU Board



RS232C Console

Fast Ethernet
(LAN0, LAN1)

AP-N1-HQA1000 Board

Audio IN
(MIC, Line IN)

Audio OUT
(HP, Line OUT)

ON-AIR Blue LAMP

Hardware Specification

AP-ABS5000 IP High Quality Audio Broadcasting Server

AP-ABS5000 Back Side

Hardware Specification

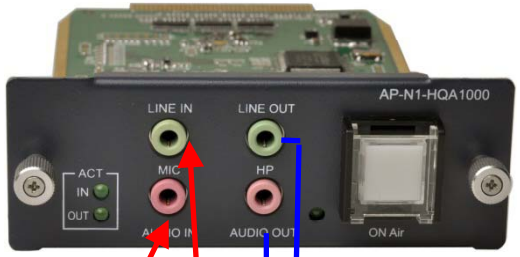
AP-ABS5000 IP High Quality Audio Broadcasting Server

AP-ABS5000 Audio Modules

Audio Module Type (AP-N1-HQA1000)	Audio Module Features	Maximum Audio Channel in AP-ABS5000
	1-Channel Audio In/Out Port Audio IN : MIC, Line IN Audio OUT : Headphone, Line OUT 3.5mm Stereo JACK High Quality MP3, G.711 Audio Codec	Up to 10 channel = 10 Module x 1 Channel

Hardware Specification

AP-ABS5000 IP High Quality Audio Broadcasting Server



Direct MIC

Connect with 1:2 Stereo Jack

Connect with 2:1 Stereo Jack

High Quality codec realizes high quality audio service
Direct MIC-In/ Headphone In Port for monitoring
Real time High Quality Audio Band Broadcasting

Headphone

AP-BCR3000
Broadcasting Router

Main Features

AP-BCR3000 Broadcasting Router

- High-End RISC Microprocessor Architecture
- Embedded System and Real-time OS
- Two(2) Module Slots for Broadcasting Service
- Two(2) Gigabit Ethernet Interface Module
- IP based Audio/Video Broadcasting Solution
- IP based Broadcasting Relay Service for Unicast Service
- IP based Network Surveillance Solution
- High-performance Audio/Video Broadcasting Service
- Routing on Demand Service for Video Monitoring
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

Hardware Specification

AP-BCR3000 Broadcasting Router

RISC CPU

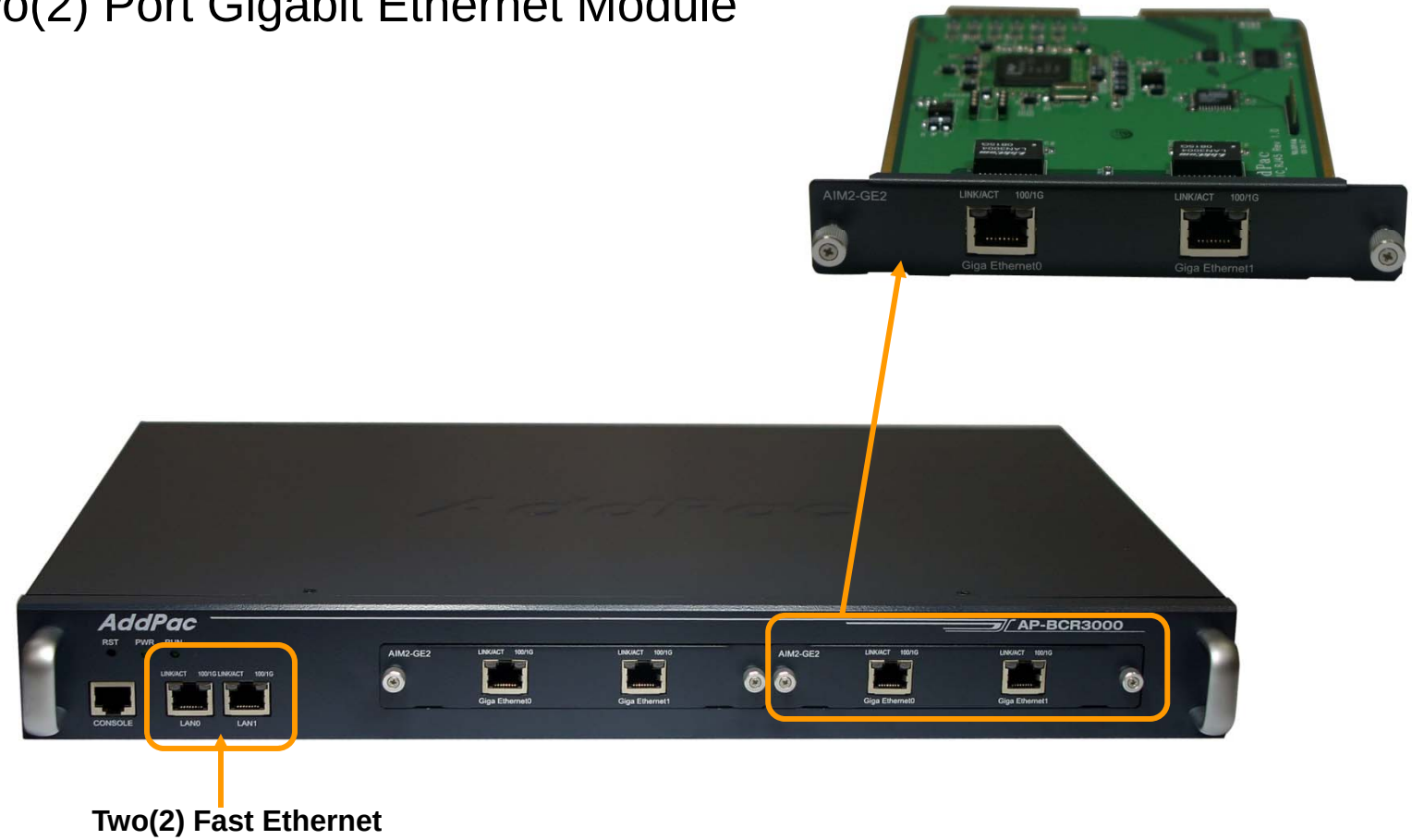
- 64bit RISC Microprocessor Computing Power
- Main Chassis
  - Network Interface
    - Two(2) 10/100Mbps Fast Ethernet
    - One(1) RS-232C Console (RJ45)
- Two(2) Gigabit Ethernet Module Slot

Hardware Specification

AP-BCR3000 Broadcasting Router

RISC CPU

- Network Module (AP-AIM2-GE2)
  - Two(2) Port Gigabit Ethernet Module



High Quality Audio Broadcasting Terminals

AP1601N
Audio Terminal

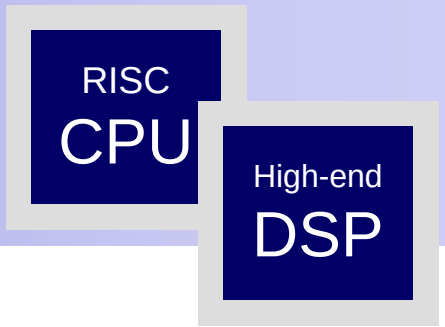
Main Features

AP1601N IP High Quality Audio Broadcasting Terminal

- IP based Audio Broadcasting Terminal Solution
- 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 (MP3, G.711, etc)
- Unicast and Multicast Broadcasting Scheme
- Enhanced MBMS (Multimedia Broadcasting Management System) Support
- One(1) channel Audio IN/OUT Port
- On-AIR Blue LAMP
- High-Quality Audio/Voice Service
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

Hardware Specification

AP1601N IP High Quality Audio Broadcasting Terminal



- 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
- High Quality Audio and Voice Interface
  - Stereo Audio Input Connector
  - Stereo Audio Output Connector
- Network Interface
  - One(1) 10/100Mbps Fast Ethernet (RJ45)
  - One(1) RS-232C Interface (RJ45) for Command Line Interface

Hardware Specification

AP1601N IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP1601N Front Side

Fast Ethernet (LAN0, LAN1)

RS232C Console

Status LCD

On-Air Blue LAMP

AP1601N Back Side

Audio Input

Audio Output

Audio Port Active LED

Audio Broadcasting Service Module

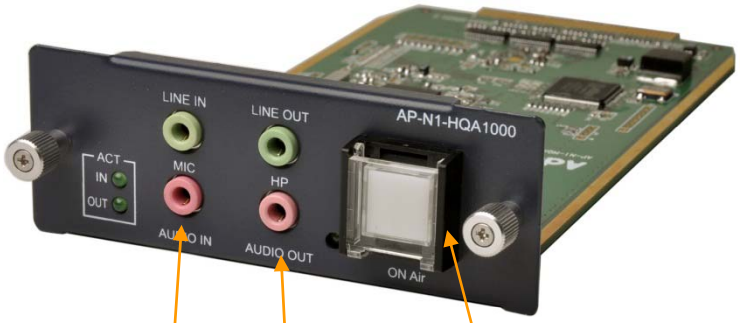
Hardware Specification

AP1601N IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP-N1-HQA1000 Board



Audio IN
(MIC, Line IN)

Audio OUT
(HP, Line OUT)

ON-AIR Blue LAMP

AP1605
Audio Terminal

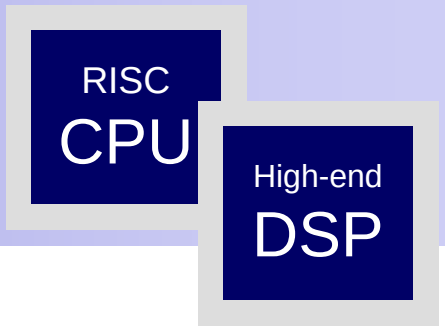
Main Features

AP1605 IP High Quality Audio Broadcasting Terminal

- IP based Audio Broadcasting Terminal Solution
- 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 (MP3, G.711, etc)
- Unicast and Multicast Broadcasting Scheme
- Enhanced MBMS (Multimedia Broadcasting Management System) Support
- One(1) channel Audio IN/OUT Port
- 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

Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal



- 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
  - Builit-in Audio AMP.

Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP1605 Front Side

Status LCD

Rotary Volume Control Switch

On-Air Blue LAMP

Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP1605 Back Side

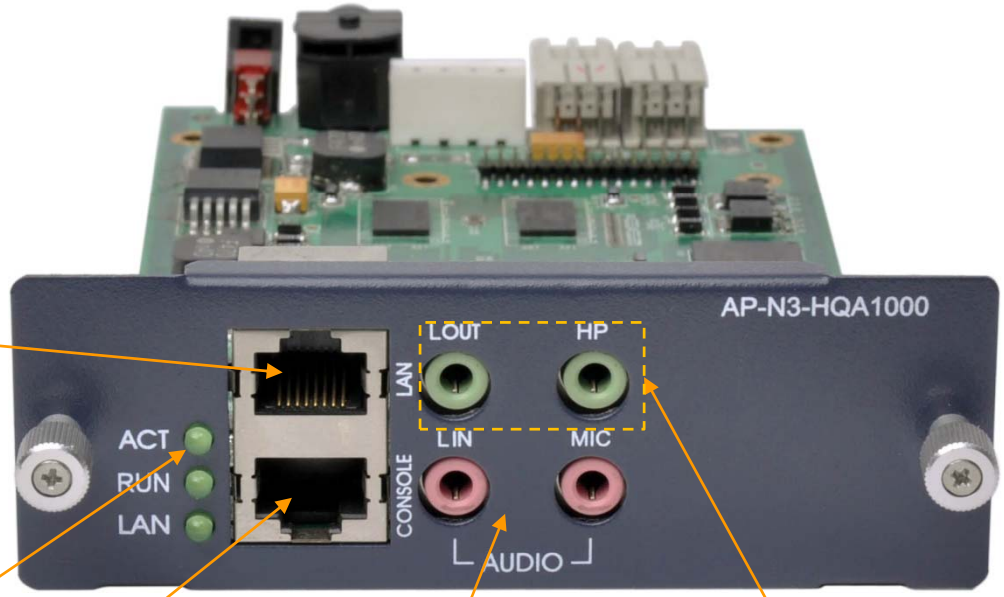
Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP-N3-HQA1000 Board



Fast Ethernet (LAN)

Audio Port Active LED

RS232C Console

Audio IN (MIC, Line IN)

Audio OUT (HP, Line OUT)

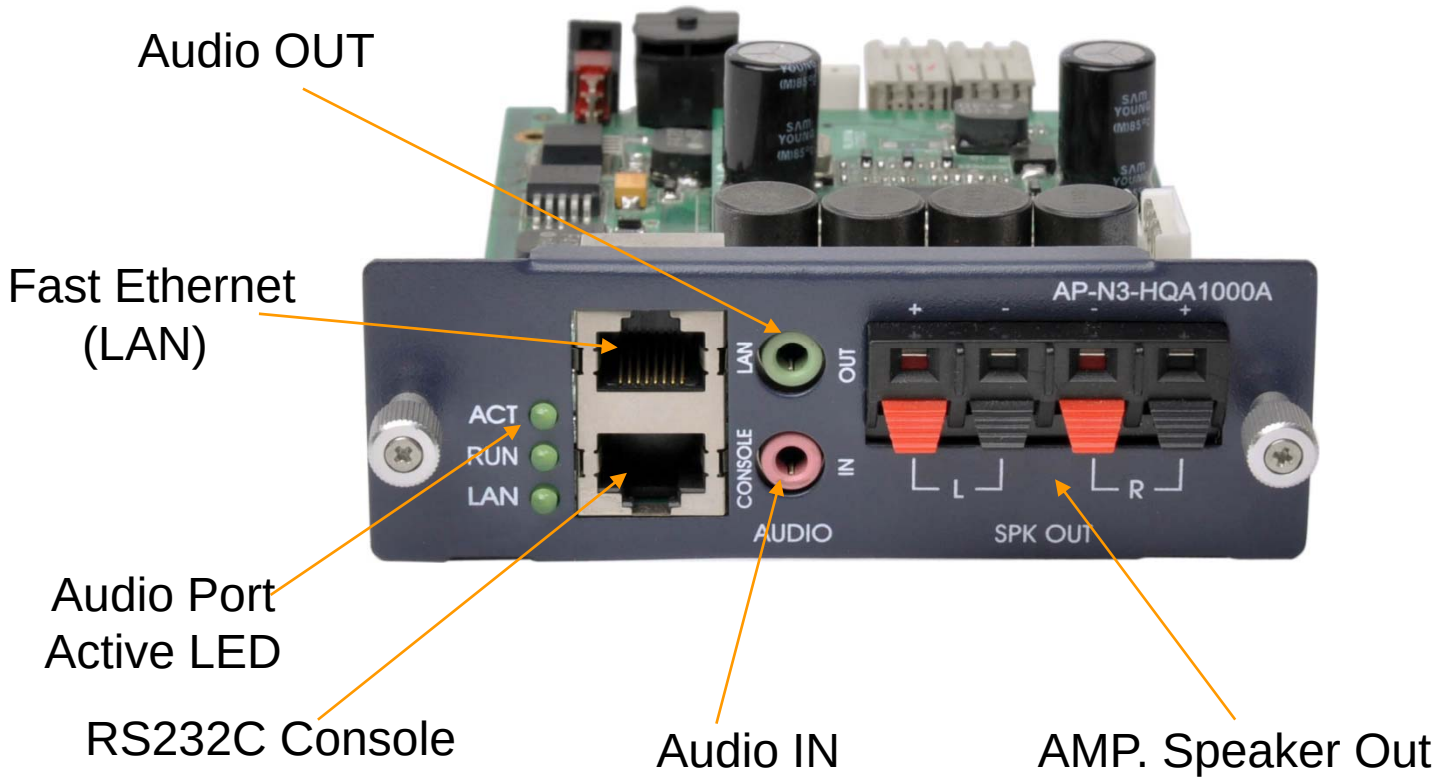
Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP-N3-HQA1000ABoard



Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP1605 Audio Module

Audio Module Type	Audio Module Features
AP-N1-HQA1000 	One(1)-Channel Audio In/Out Port One(1) Fast Ethernet Port One(1) RS232C Port Audio Encoding/Decoding Service Audio IN : MIC, Line IN Audio OUT : Headphone, Line OUT 3.5mm Stereo JACK High Quality MP3, G.711, etc Audio Codec

Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

High-end DSP

AP1605 Audio Module

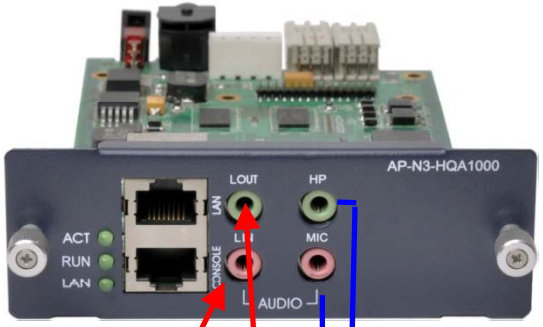
Audio Module Type	Audio Module Features
AP-N1-HQA1000A 	One(1)-Channel Audio In/Out Port One(1) Fast Ethernet Port One(1) RS232C Port Audio Encoding/Decoding Service Audio IN Audio OUT AMP. Built-in Speaker Out (Left, Right) 4ohm Speaker : 50Watt 8ohm Speaker : 30Watt High Quality MP3,G.711 Audio Codec

Hardware Specification

AP1605 IP High Quality Audio Broadcasting Terminal

RISC CPU

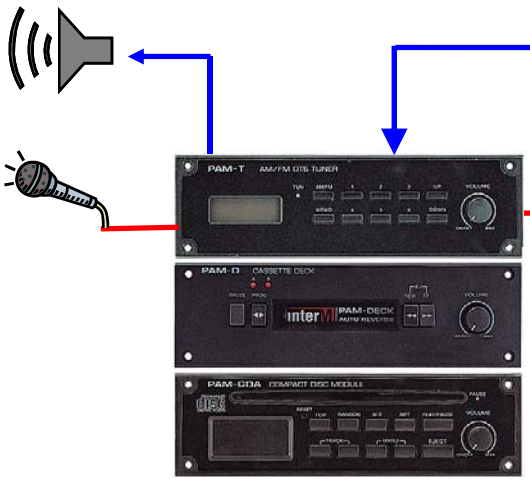
High-end DSP



Direct MIC

Connect with 1:2 Stereo Jack

Connect with 2:1 Stereo Jack



MP3, WMA codec realizes high quality audio service
Direct MIC-In/ Headphone In Port for monitoring
Real time High Quality Audio Band Broadcasting

Headphone

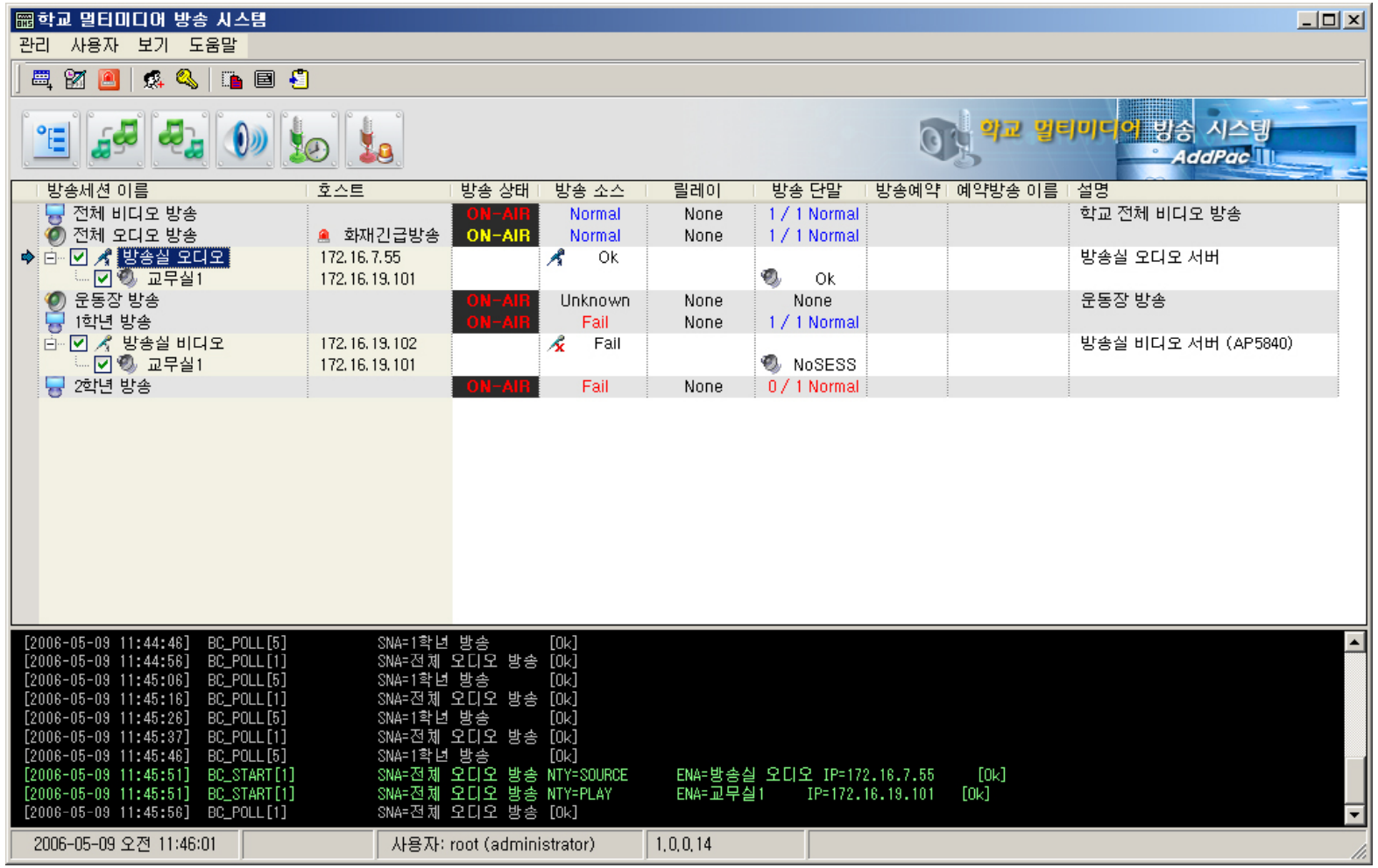
MBMS (Multimedia Broadcasting Management System) 2.0

Contents

- 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

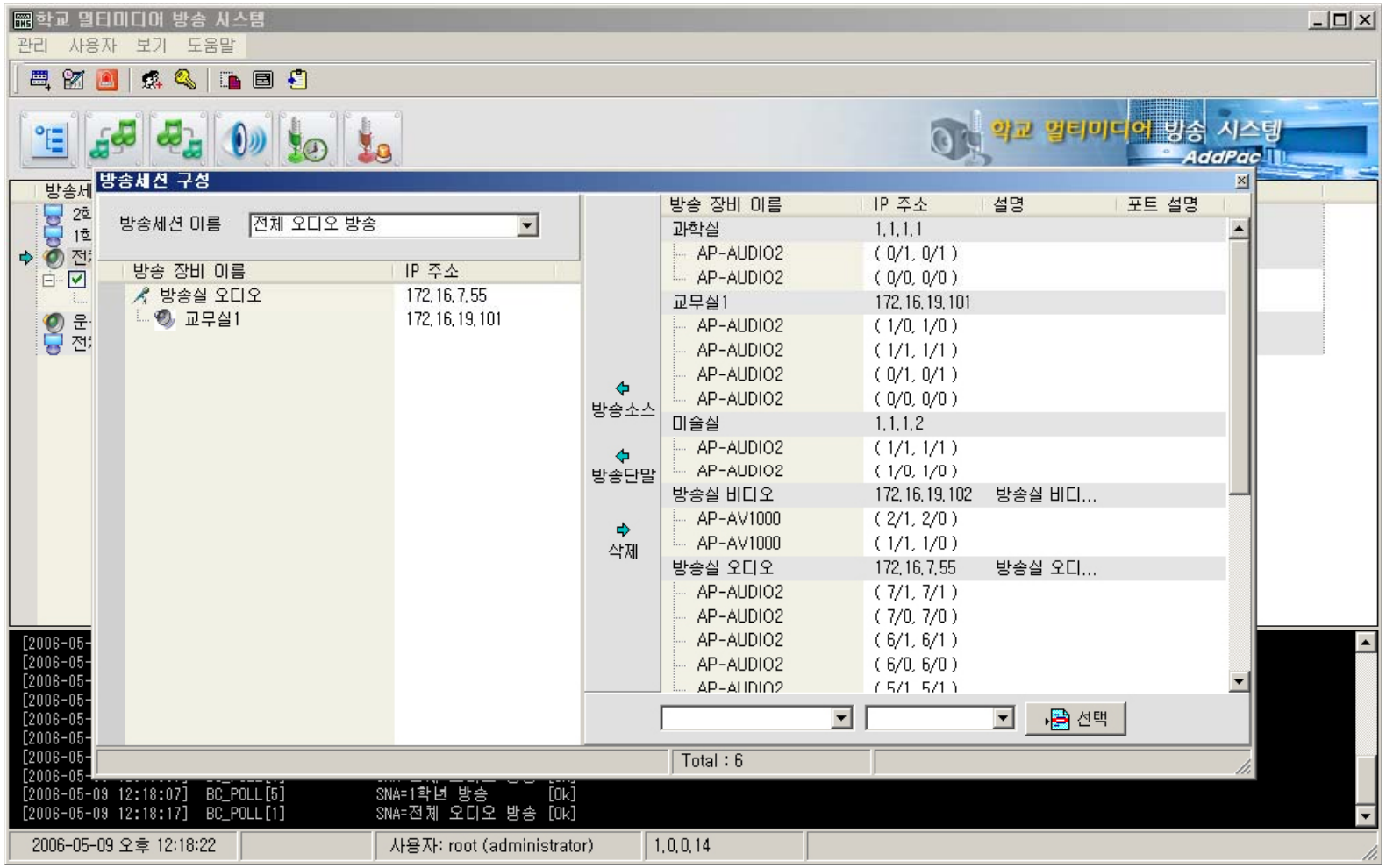
MBMS S/W Startup (Example)

AP1605 IP Audio Broadcasting Terminal



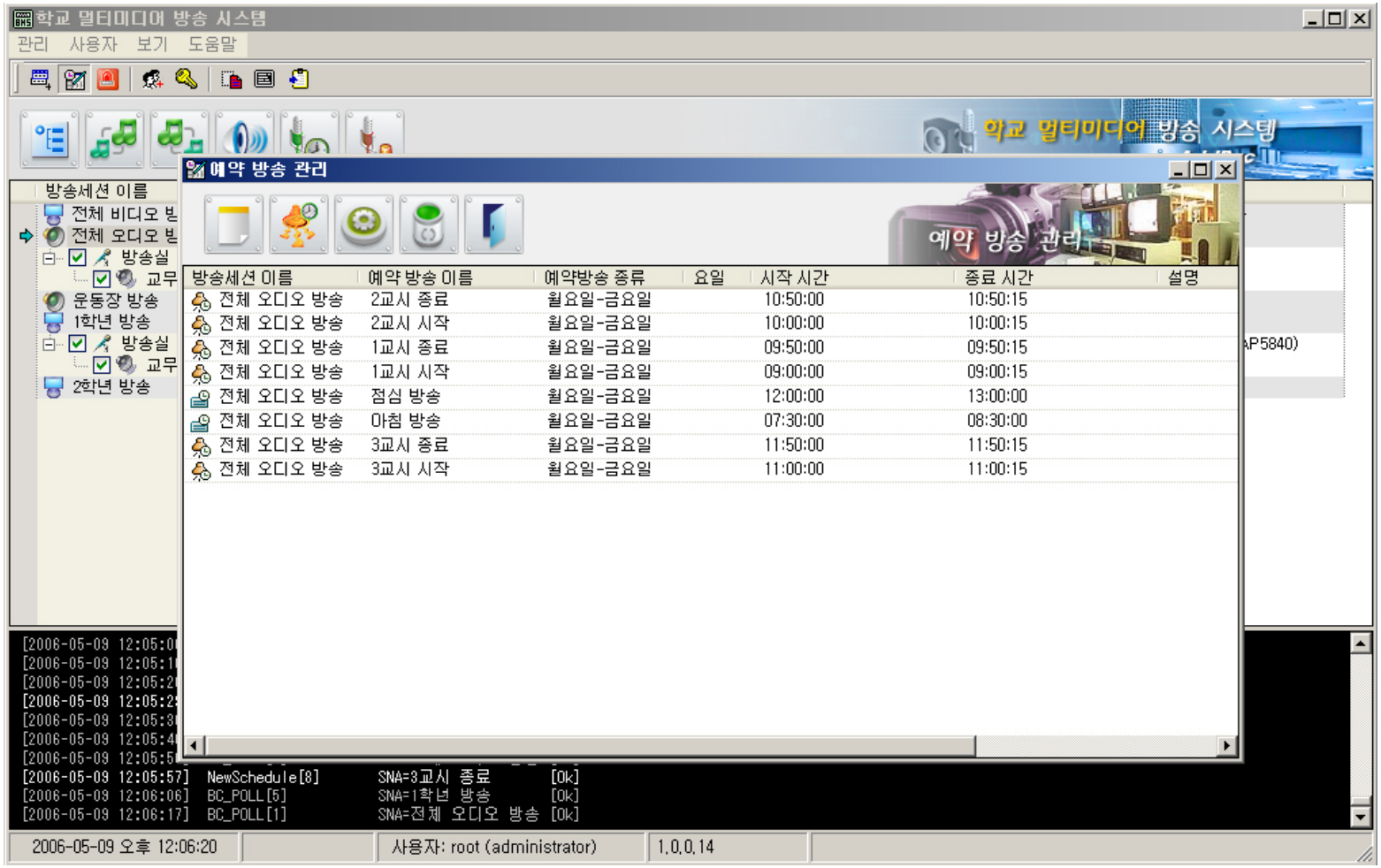
Broadcasting Equipment Management (Example)

AP1605 IP Audio Broadcasting Terminal



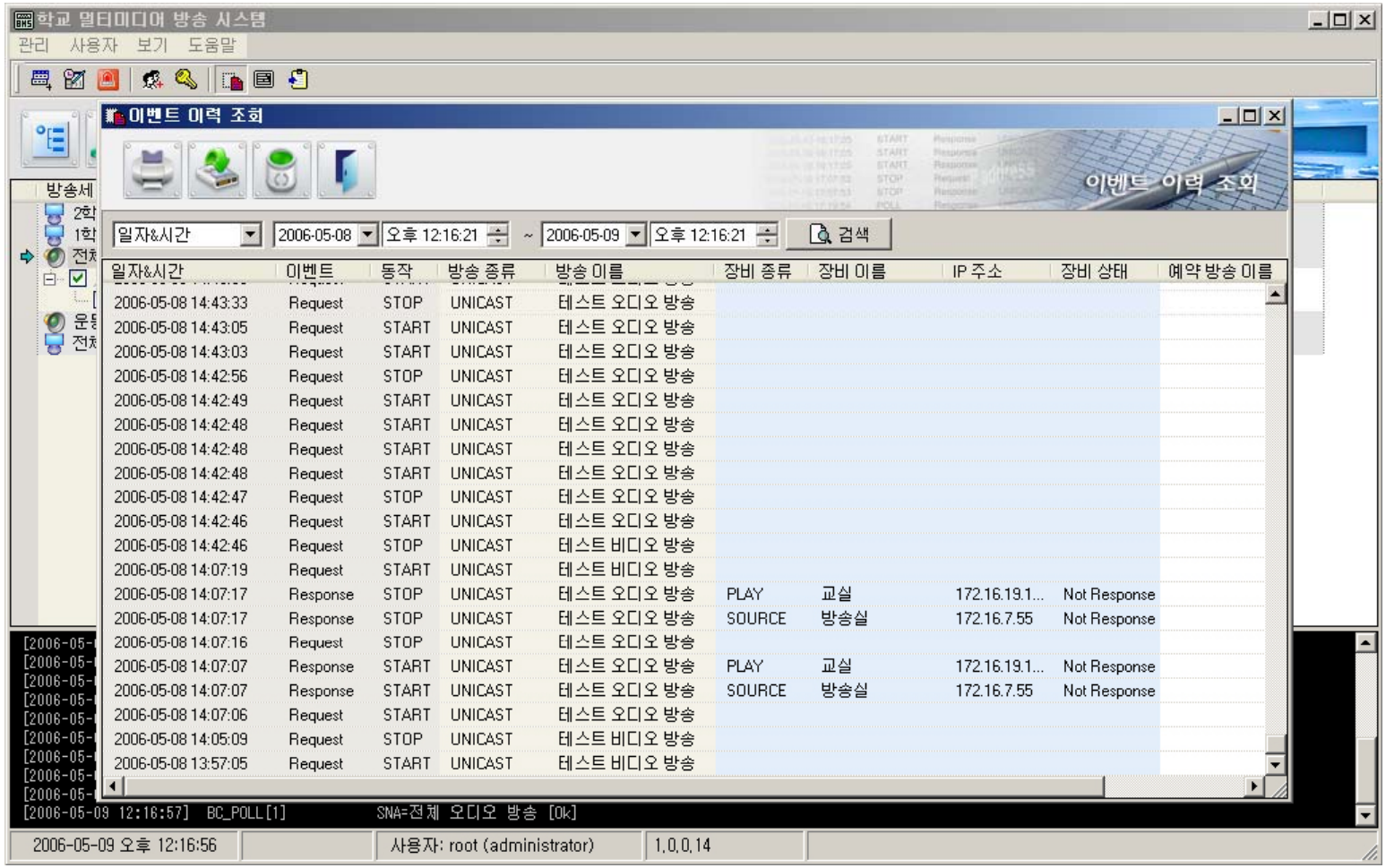
Broadcasting Scheduling (Example)

AP1605 IP Audio Broadcasting Terminal



Event Log (Example)

AP1605 IP Audio Broadcasting Terminal



Thank you!

AddPac Technology Co., Ltd.
Sales and Marketing

Phone +82.2.568.3848 (KOREA)
FAX +82.2.568.3847 (KOREA)
E-mail sales@addpac.com