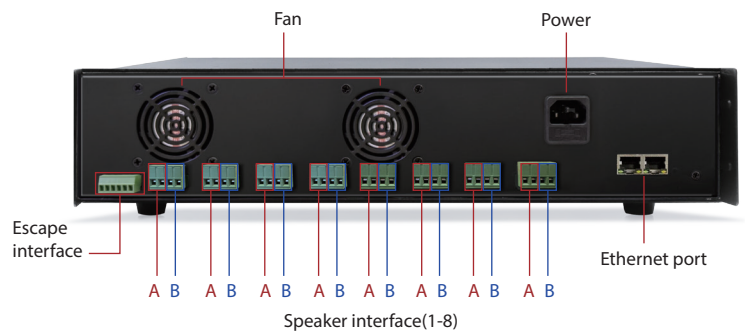
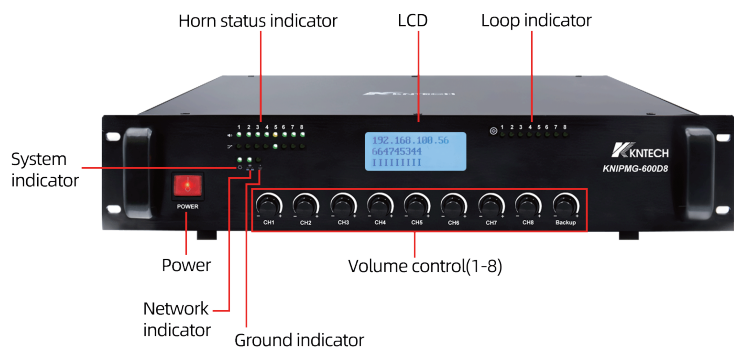


PA IP AMPLIFIER

Model: KNIPMG-600D1 / KNIPMG-600D4 / KNIPMG-600D8

The Unfailing Voice of Your Mission-Critical System



*All models in this series are rated at 600W

KNIPMG-600Dx, where "x" indicates the number of channels, x = 1 for 1-Channel; 4 for 4-Channel; 8 for 8-Channel

WHEN ABSOLUTE RELIABILITY IS THE ONLY ACCEPTABLE STANDARD.

In environments where every message can be critical — from coordinating daily operations in a bustling transit hub to directing a safe evacuation from a hospital wing — the power and clarity of your communication system are non-negotiable. You need more than just volume; you need intelligible, dependable, and instantaneous power that gives every announcement authority and every alert its due urgency.

Imagine an amplification backbone so robust and intelligent that it functions as the powerful, unwavering voice of your entire PAVA system. A system that dynamically adapts to deliver pristine audio exactly where it's needed, while providing the certified assurance and operational resilience demanded by the world's most critical infrastructures.

This is the promise of the **KNTECH KNIPMG-600 Series IP Amplifier**. It is the muscle behind the message, engineered to ensure that every word is heard, every instruction is understood, and your duty of care is upheld without compromise.

■ Key Functional Features & Benefits: Engineered for Certainty

I. Dynamic Power & Pristine Fidelity: The Core of Intelligible Audio

 **Intelligent Power Delivery with Class-D Efficiency:** Experience the pinnacle of amplification technology. Our powerful 600W Class-D engine provides exceptional audio fidelity with significantly reduced power consumption and heat dissipation. This sustainable design not only lowers your total cost of ownership but also enhances operational lifespan, a critical factor for 24/7 deployments. Analog input available on KNJB-PA09Box

 **High-Fidelity, High-Impact Audio:** Cut through ambient noise with commanding clarity. With a distortion factor of less than 0.5% at rated power and a wide frequency response, our amplifiers ensure your messages are not just loud, but exceptionally clear and intelligible, preserving the integrity of every broadcast.

 **Versatile Output Architecture:** Your operations are unique, and your system should be too. Our amplifiers provide flexible power distribution with freely assignable output per channel, supporting both 70V and 100V lines with direct drive capability. This ensures seamless integration whether you are retrofitting an existing speaker network or designing a new one.

II. Unbreachable Resilience: Designed for 24/7/365 Uptime

 **“Hot Spare” Redundancy for Uninterrupted Service:** Imagine a system that heals itself. With an (n+1) redundant channel architecture, a spare channel is on immediate standby to ensure automatic, instantaneous failover. This core feature eliminates single points of failure and guarantees that your critical communications are never compromised.

 **Dual Redundant Power & Network Paths:** We have engineered redundancy into every critical pathway. Dual 48Vdc power supply inputs and dual RJ45 network ports supporting A/B redundant speaker lines create a fault-tolerant foundation, ensuring your system remains operational even during power fluctuations or network challenges.

 **Certified for Life Safety:** Your commitment to safety is our priority. This system is designed and certified to meet the world's most rigorous standards for Voice Alarm systems, including EN 54-16 and ISO 7240-16. This is your independently verified assurance that the system will perform flawlessly when it matters most.

III. Proactive Intelligence: Total System Insight and Control

 **Comprehensive Self-Diagnostics & Monitoring:** Gain a complete window into your system's health. The amplifier continuously monitors for short circuits, temperature fluctuations, voltage failures, and speaker loop integrity using a 22kHz pilot tone. This proactive intelligence allows you to address potential issues before they become critical, dramatically reducing maintenance costs.

 **Intuitive Web-Based Management:** Sophisticated control has never been this simple. Our user-friendly, browser-accessible portal provides centralized control for remote configuration, status monitoring, and the scheduling of announcements with full time-synchronization capability.



Seamless System & Protocol Integration: Built for the future, while respecting your current infrastructure. The amplifier supports a suite of modern network protocols (RTP, UDP, TCP/IP, SIP, FTP) and is compatible with standard Ethernet (CAT5/CAT6) and fibre optic infrastructures, ensuring a smooth and future-proof integration into your broader ecosystem.

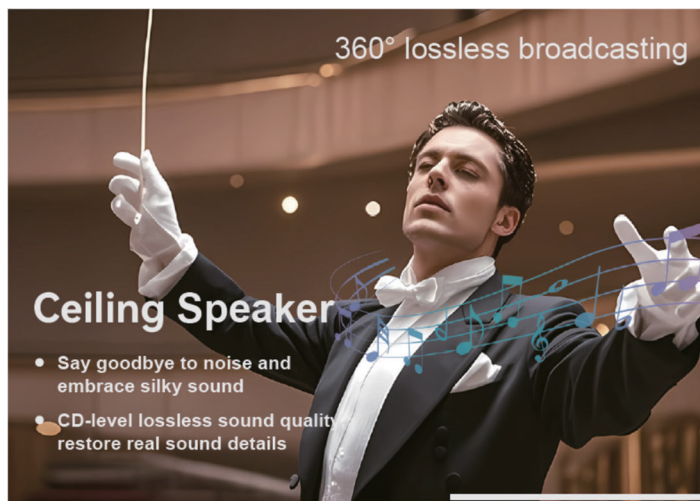
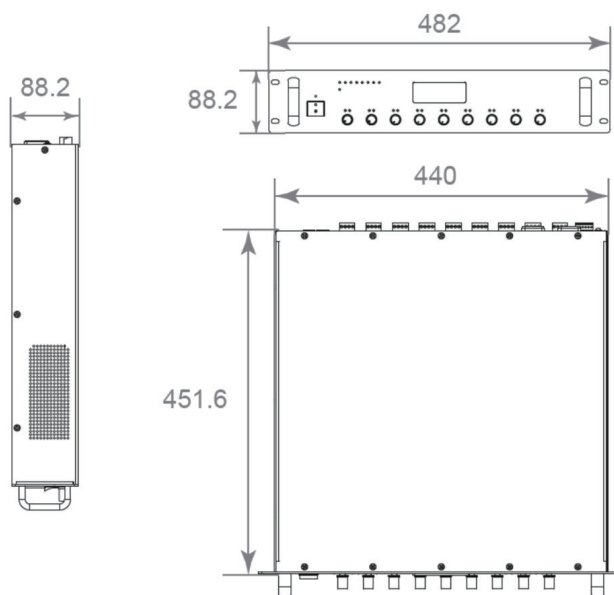
Specifications

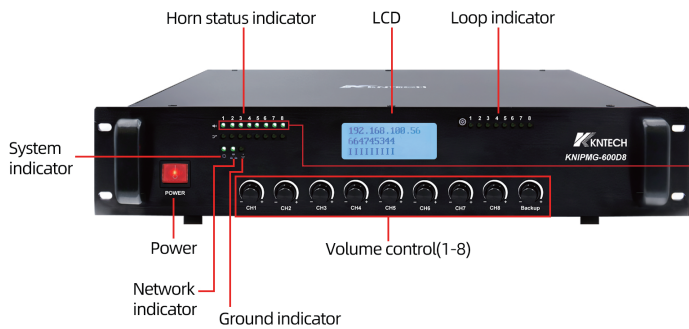
Parameter	Description
Model	■ KNIPMG-600D1 (1-Channel, 600W) ■ KNIPMG-600D4 (4-Channel, 600W) ■ KNIPMG-600D8 (8-Channel, 600W)
Performance Specifications	
Rated Power	600W
Frequency Response	20~20kHz (+3dB), exceeding the PA system requirement of 50 to 15kHz(±3dB)
Signal to Noise Ratio (SNR)	> 85dB, exceeding the minimum requirement of 70dB < 0.5% at 1kHz, meeting the standard requirement of < 1%
Output Regulation	Less than 2dB from no load to full load, with stability under no load conditions
Sampling Rate / Signal Processing	48kHz / Digital Signal Processing
Output & Protection	
Amplifier Output	70V / 100Vdc with output matching transformer protection and galvanic isolation
Protection Circuit	Overheat, Overvoltage, Overcurrent, Short Circuit Protection, with automatic power sequencing
End-of-Line Detection Mode	Pilot-Tone 22kHz
Network & Integration	
Protocols	RTP,UDP,TCP/IP,SIP,FTP with support for scheduled announcement programming
Network Interface	RJ45*2 10 / 100 BASE-T
Audio Format	MP3 / WAV / WMA / Tuner / Bluetooth and more decoding
Integration	Compatible with standard Ethernet infrastructure (CAT5 / CAT6) or fibre optic cabling for reliable digital signal transmission
Redundancy & Monitoring	
Power Supply	Redundancy Dual 48Vdc Power Supply with 24 x 7 round-the-clock operation capability
Redundancy Features	8 channel + 1 spare channel with capacity for automatic failover
Monitoring Capabilities	Visual and aural monitoring of output levels for each broadcast zone with LED status indicators
Physical & Environmental	
Operating Temperature / Humidity	-10°C ~ +50°C , < 95%
Index of Protection	IP30

Parameter	Description
Material / Colour	Black
Dimensions (H x W x D)	482 (W) x 88.2 (H) x 451.6 (D) mm
Mounting	2U Rack-mounted Design
Compliance	
Redundancy	Certified compliance with EN 54-16 and ISO 7240-16 standard
	CE marked and RoHS compliant
	IEC 61082
	IEC 60300
	IEC 60068
	IEC 60050
	IEC 62368
	IEC 60601-1 and IEC60601-1-2

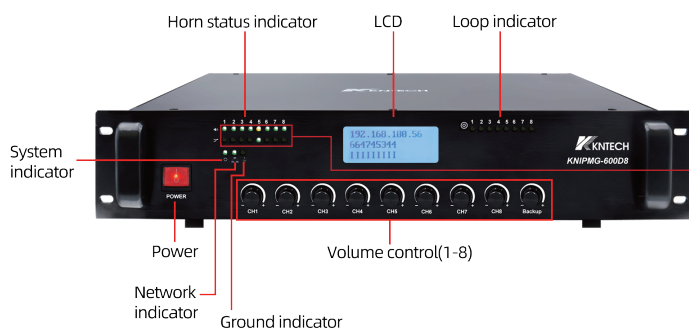
■ Dimension

Unit in mm





The top row of green lights indicates that all 8 channels are operating normally.



When one of the lights in the first row turns orange, it means that the corresponding channel has failed. The light directly below it will then illuminate, indicating that the backup channel is taking over the failed channel.

Your Partner in Building a Safer, More Connected Future

Choosing the right technology is about more than specifications; it is about choosing a partner you can trust. With over 40 years of global experience in equipment design and marketing, we understand the unique challenges and stringent requirements of large-scale public and private sector projects.

The **KNTECH KNIPMG-600 Series** is the culmination of this experience, engineered to provide not just a solution, but confidence. It is a commitment to quality, reliability, and the unwavering safety of the people you serve.

Take the first step towards a more secure and efficient communication ecosystem.

Contact us today to schedule a personalized demonstration and discover how the KNIPMG-600 Series can become the powerful, intelligent voice of your operations.

Web: www.koontech.com

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Factory: KNTECH Building, Phoenix Mountain, Limhai Zone, Shajiao Community, Humen, Dongguan, China

AUDIO EXPANDER & INTEGRATION GATEWAY

Model: KNJB-PA09Box / KNJB-PA09BoxT *

The Bridge to Universal Control

* the KNJB-PA09BoxT model features an integrated Telephone



WHEN ISOLATION THREATENS CONTROL. WE ENSURE SEAMLESS INTEGRATION

In any large-scale facility, true operational command comes from the seamless integration of all systems. Your Public Address system cannot exist in a vacuum. It must communicate intelligently with life-safety systems, building management platforms, and third-party audio sources. The challenge has always been achieving this integration with absolute reliability and without compromise.

Imagine a single, intelligent nexus that acts as the master translator for your entire facility. A gateway that flawlessly bridges your core KNTech PA system with critical third-party infrastructure, from fire alarm control panels to external music sources and telephone networks. A device that ensures every signal, every trigger, and every audio stream is managed with precision and delivered with clarity.

This is the promise of the **KNTech KNJB-PA09Box Series**. It is more than an interface; it is the central hub for system interoperability, engineered to unify your technologies and empower you with complete, centralized control.

■ Key Functional Features & Benefits: Engineered for Seamless Integration

I. Universal Connectivity & Control



Pristine, Multi-Source Audio Integration: Seamlessly incorporate up to 10 channels of external, high-definition (24-bit, 48 kHz) audio into your PA system. This allows for the flawless broadcast of everything from high-quality background music (e.g., from a Mac Mini or media player) to critical audio from specialized third-party equipment, ensuring a rich and versatile auditory environment.



Intelligent Third-Party System Triggering: The gateway features 10 dry contact inputs and 10 dry contact outputs, alongside Modbus (TCP/RTU) protocol support. This provides a robust and reliable bridge to essential building systems. Its most critical application is linking to a fire protection system, allowing fire alarm triggers to automatically route emergency announcements with the highest priority, ensuring compliance and passenger safety.



Telephone System Integration (KNJB-PA09BoxT): The specialized “T” model provides a direct interface to third-party telephone systems. This enables authorized personnel to make live public address announcements directly from a telephone handset, adding a vital layer of flexibility and accessibility for emergency and operational communication.

II. Centralized & Flexible Management



Intuitive Web-Based Configuration: Eliminate complex programming and on-site adjustments. A simple and powerful Web GUI gives your engineers complete control over the entire device. Configure network settings, manage audio routing, and define control logic from a centralized and secure interface.



Dynamic Input-to-Zone Routing: You have complete freedom to decide where every signal goes. The web interface allows you to freely select and configure the output zone for each of the 10 audio and 10 dry contact inputs. This empowers you to create highly customized and adaptive communication scenarios tailored to your facility's specific operational needs.



Clear, At-a-Glance Status Monitoring: Front-panel LED indicators for all 10 channels, plus power and network status, provide immediate visual confirmation of the system's operational state. This simplifies diagnostics and gives operators the confidence that all connections are active and functioning correctly.

III. Carrier-Grade Reliability & Performance



Engineered for 24/7/365 Uptime: In critical systems, reliability is not optional. The KNJB-PA09Box is designed with a Mean Time Between Failures (MTBF) of over 100,000 hours, ensuring it performs as a trusted and durable component of your infrastructure.



Built for Demanding Environments: Your technical rooms can be harsh environments. With a wide operating temperature range of -25°C to 75°C and a robust metal chassis, this gateway is built to withstand the rigors of continuous operation in any equipment rack.



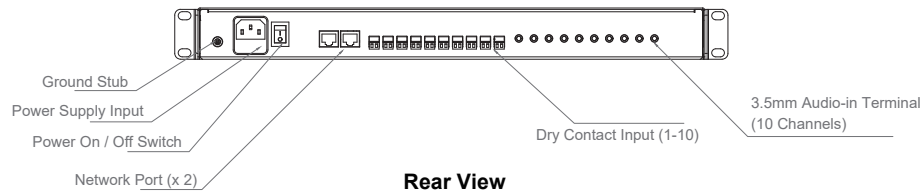
Non-Volatile Memory: Configurations are your system's intelligence. All programming and configuration settings are stored in non-volatile flash memory, guaranteeing that your custom settings are securely retained even through power cycles and ensuring immediate operational readiness upon restart.

■ Specifications

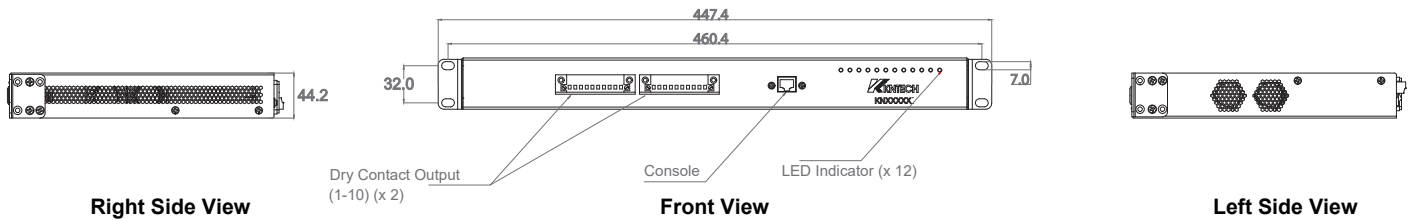
Parameter	Description
Model	■ KNJB-PA09Box: Audio & Dry Contact Integration Gateway ■ KNJB-PA09BoxT: Adds Telephone System Interface Module
Audio & Control Interfaces	
Audio Inputs	10 x High-Definition Channels (24-bit, 48 kHz) via 3.5mm terminal
Dry Contact Inputs	10 x Dry Contact Input Groups
Dry Contact Outputs	10 x Dry Contact Output Groups
Control Protocols	Supports MODBUS (RTU / TCP) and Dry Contact for third-party system control
Network & Integration	
Ethernet Type	100Base - TX Ethernet
Network Ports	2 x RJ45 Connectors (for Cat5e or better)
Network Protocols	Audio-over-IP, DHCP, Static IP
Configuration	Full programming and configuration via secure Web GUI
System Memory	Non-volatile flash memory for configuration retention
Performance & Reliability	
MTBF	> 100,000 hours
MTTR	< 2 hours
Features	
Hand Held PPT Microphone	Support multi brand Fire Alarm System
Priority level	
Sirene & Voice Audio Message Evacuation	Manual/Auto trigger recorded message
Physical & Environmental	
Operating Temperature	-25°C to + 75°C
Power Supply	AC 110V ~ 240V (Internal) * Optional DC 12V input (Max 24W)
Case Material	Durable Steel / Metal Alloy
Status Indicators	12 Front-Panel LEDs for Power, System Status, and Channel Activity
Dimensions (W x D x H)	477.4 x 260 x 44.2 mm
Mounting	Rack-mounted: 19in, 1U

■ Dimension

Unit in mm



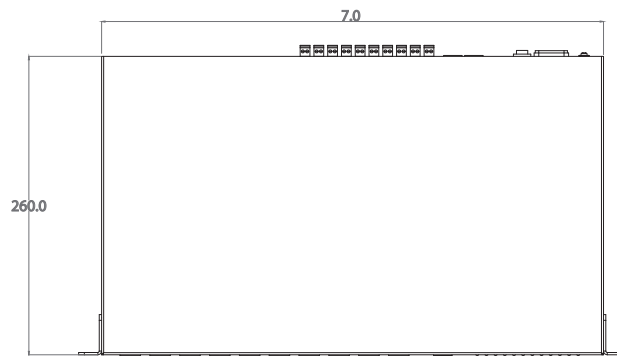
Rear View



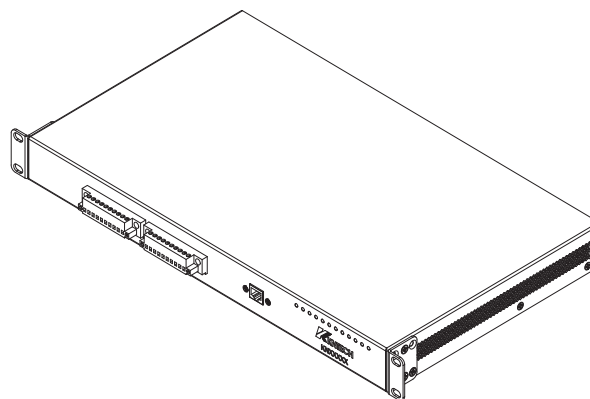
Right Side View

Front View

Left Side View



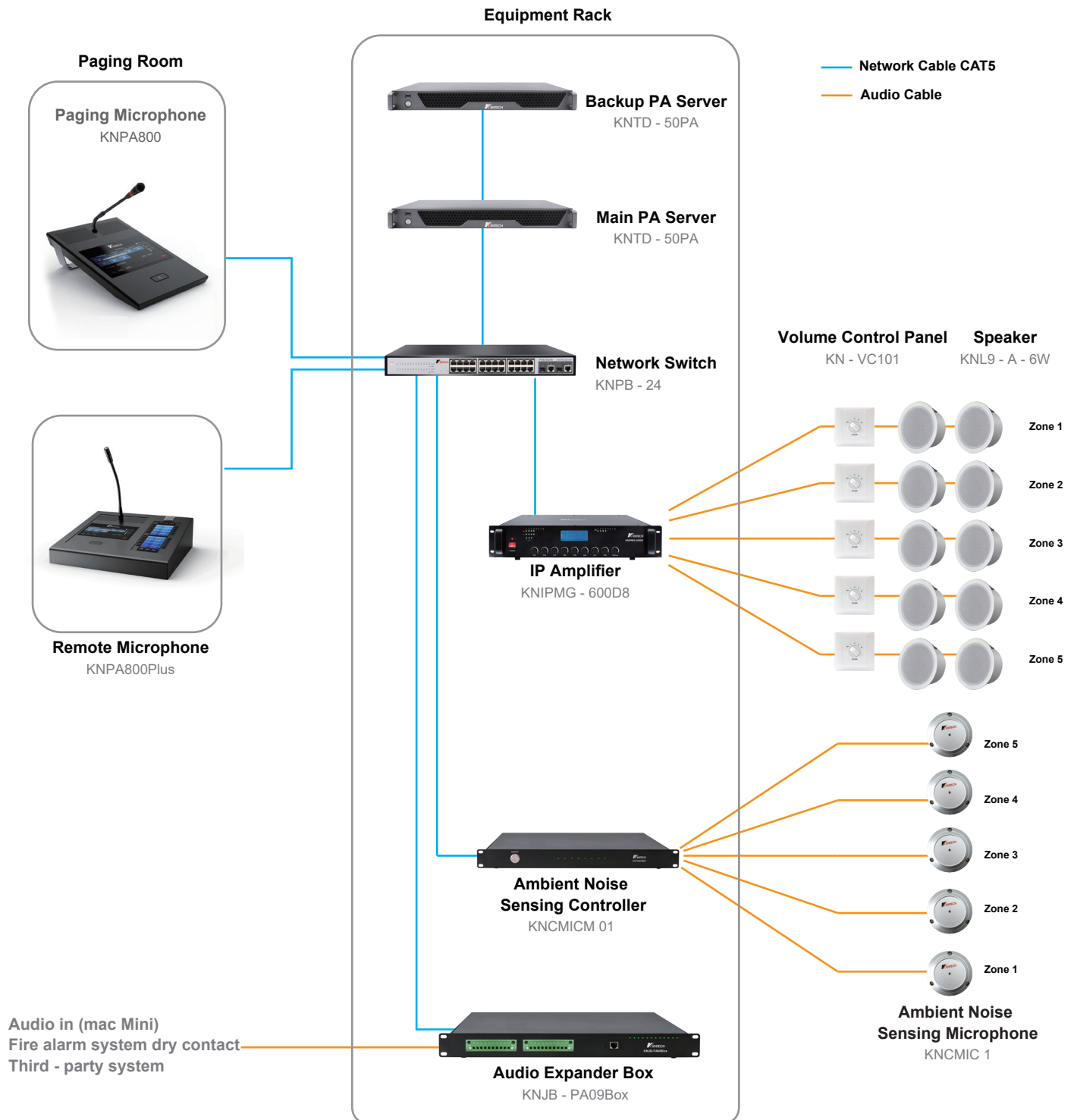
Top View



Isometric View

■ System Architecture: The Central Integration Hub in Action

The diagram below illustrates how the **KNJB-PA09Box** acts as the essential bridge, enabling communication between third-party systems and the core **KNTech PA network**. It intelligently receives inputs from sources like a Fire Alarm System (via Dry Contact) and external BGM (e.g., Mac Mini), processing them for broadcast across designated PA zones.



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The **KNTech KNJB-PA09Box Series** is the culmination of this experience, engineered to provide not just a solution, but confidence. It is a commitment to quality, reliability, and the seamless integration of the systems you depend on.

Take the first step towards a fully integrated and efficient communication ecosystem.

Contact us today to discuss your specific integration needs.

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