## Embedded software: IP active speaker sound reinforcement software V2.01



### Description

IP network speakers are suitable for ordinary classrooms, offices, prisons, hospital departments and other places. They are used to play reminder voices or background music programs. They can also be used as local broadcast amplification.

#### Feature

\*The speaker is designed with high-density ABS material, which has the advantages of shockproof, durability, exquisite appearance, etc.

- \*Built-in microphone, supports audio detection, supports collecting and detecting audio frames, network packet loss rate, maximum frame spacing, link crossing points and other data, and analyzes playback status and audio recognition, and uploads it to the background, supports exporting reports.
- \*It has 1-channel line (AUX) input interface, supports network volume adjustment, and supports local sound amplification function when disconnected from the network.
- \*The wireless audio module can be expanded to realize local sound amplification with wireless microphone. The Bluetooth receiver can be expanded to receive Bluetooth audio for local sound amplification.
- \*It has 1-channel short-circuit input interface, which supports customized alarm triggering, local media library music playback, volume adjustment and other functions.
- \*The dual network interface design and the terminal support redundant backup function effectively avoid the problem of the device being unable to permanently connect to the system due to a single point of failure.
- \*It has 1-channel 100V constant voltage signal backup input interface, which switches to the backup channel when the machine is without network to avoid crosstalk between local signals and backup signals.
- \*Supports network and analog 100V main and standby switching functions. Supports automatic switching to the analog 100V constant voltage backup line when power is off or the network is disconnected. The delay of the hearing backup switching is less than 0.03 seconds. There is no delay, no lag, no dropout during the switching process, and it does not affect the normal broadcast; when the network and power supply return to normal, it automatically switches to the main channel. The switching time is less than 0.03 seconds. There is no delay, no lag, no dropout during the switching process, and it does not affect the normal broadcast; when the network and power supply return to normal, it automatically switches to the main channel. The switching time is less than 0.03 seconds. There is no delay, no lag, no dropout during the switching process, and it does not affect the normal broadcast.
- \*The main speaker has a built-in 2×20W (MAX) dual-channel Class D digital power amplifier, and one channel is connected to the subspeaker, adopting a high and low frequency division design; the sound quality is delicate and the power is strong; it has a network volume setting.
- \*Built-in network audio decoding module, supports mainstream audio formats such as MP3, WAV, FLAC, OGG, AAC, OPUS, etc., and is compatible with the full sampling rate of 8kHz-48kHz.
- \*Built-in DSP audio processing, supports ultra-low latency digital mixing, and 10-band EQ equalization configuration.
- \*Built-in 3-level priority settings: (1) Network alarm signals take priority over local input signals and 100V analog backup. (2) The priority of local input signals MIC, AUX and network background music is configured by the server; local input signals MIC and AUX are mixed at the same level. (3) 100V analog backup signals have the lowest priority.
- \*Supports remote firmware upgrades and performs maintenance on terminal devices through the network, effectively reducing the workload of maintenance personnel.
- \*The system adopts data redundancy encoding and decoding algorithm and supports anti-packet loss recovery function. The network packet loss is 37.5%, and the audio playback is smooth.

# Embedded software: IP active speaker sound reinforcement software V2.01

#### Specification

Network interface	Standard RJ45×2 input
Transmission rate	100Mbps
Supported protocols	TCP/IP, UDP, IGMP, ICMP
Audio format	Supports mainstream audio formats such as MP3, WAV, FLAC, OGG, AAC, OPUS, etc.
Audio mode	16-bit CD-quality sound
Sampling rate	8kHz-48kHz
Auxiliary line input level	350mV Industrial standard 2.54mm crimping terminal block
Frequency response	80Hz-16kHz (+1dB/-3dB)
Harmonic distortion	≤1%
Signal-to-Noise Ratio	≥73dB
Output power	2×20W (MAX)
Maximum sound pressure level	95dB
Sensitivity	86dB
Power consumption	45W
Short circuit input	Dry contact input industrial standard 2.54mm crimping terminal
Backup 100V input	Industrial standard 5.08mm crimping terminal
Working environment temperature	5°C ~ 40°C
Working environment humidity	20% ~ 80% relative humidity, no condensation
Input power	DC24V 1.5A
Main box net weight	1.5kg
Net weight of auxiliary box	1.1kg
Dimensions (L x W x H)	164.93×67.74×296.64mm