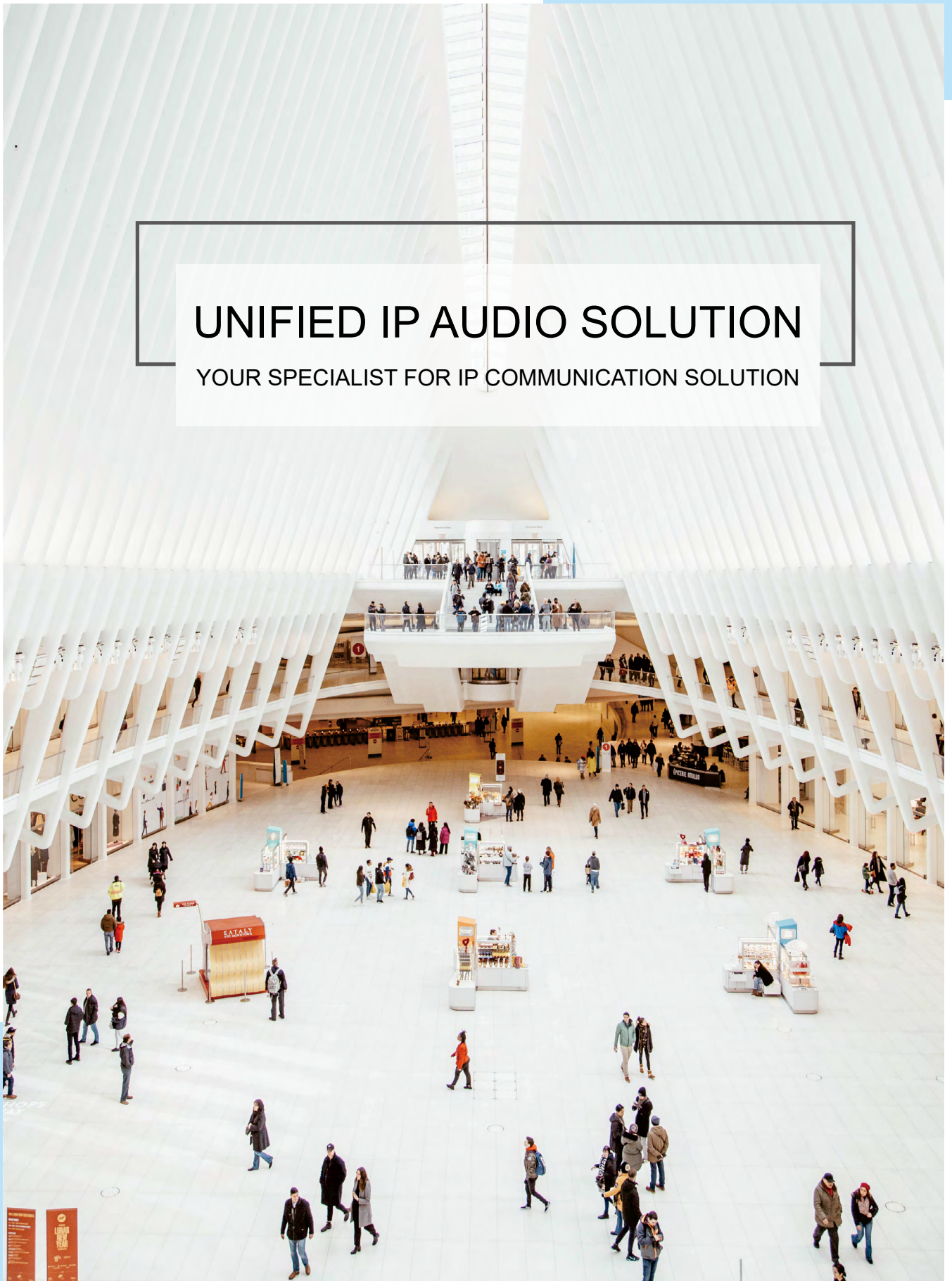# UNIFIED IP AUDIO SOLUTION

YOUR SPECIALIST FOR IP COMMUNICATION SOLUTION

Solution Overview

ZYCOO IP Audio Solution is a comprehensive IP audio communication system built on SIP, streaming media, and MQTT IoT technologies. Our solution supports a range of functionalities, including broadcasting, intercom, telephony, paging, and more.

The architecture comprises an IP audio server, IP audio endpoints, IP audio dispatch console, and IP audio dispatch app. The IP audio endpoints are hardware-based devices such as network speakers, network intercoms, network paging gateways, network power amplifiers, network microphone consoles, network panic buttons, and IP phones. The IP audio dispatch console, installed on a computer, and the IP audio dispatch app, compatible with both Android and iOS, are software-based components.

The IP audio server can be deployed on a computer, in the cloud, or through our dedicated IP audio server, the IAS-L100, for on-premises setups. The solution is designed to operate seamlessly over standard intranet or internet networks without requiring specialized equipment or cabling, as shown below.

Solution Features

Background Music

By using ZYCOO IP Audio Solution, users can easily create music playlists with any desired music file combination, then play background music by choosing a specific music playlist for a particular device or group. The stop, volume control, previous/next track features are all supported.

IP PBX Features

Besides the full-featured public address system, ZYCOO IP Audio Solution also has IP PBX features enabled, such as digital receptionist, inbound control, outbound control, click to page, call monitor, call whisper, call split, and so on. Furthermore, users can integrate standard SIP trunking into the system to achieve the outbound features, with no upper limit on the number of SIP trunks.

Video Intercom & Video Linkage

ZYCOO IP Audio Solution can provide video intercom and video linkage features. For example, network video intercom VI-V05 has a built-in HD camera that provides direct video calls. For all of the VI Series, external IP cameras with RTSP support can be integrated with the IP Audio Center. Simply inputting the camera's RTSP address, and the system fetches the real-time streaming when an intercom call is initiated.

Unlimited Paging Groups

Expansion of the paging zone when using the analog system can be difficult and costly. Users can create unlimited number of paging zones, users can create any number of paging zones to achieve zone-based paging, emergency alarms, background music, etc.

Dispatch User Privilege

ZYCOO IP Audio Solution supports an unlimited number of dispatch users, and more than one dispatch user can access the same paging group. With the flexibility of group permission and access level control, the administrator can easily assign different levels of authority to dispatch users. Each dispatch user can operate separately without interfering with other dispatch users, including paging, music broadcasting, conferencing, etc.

Multiple Task Types

By using the ZYCOO IP Audio Solution, users are provided with four types of tasks: immediate, timetable, dial-number, and one-click. The immediate task is triggered instantly once it is set. Timetable tasks can be scheduled to play repeatedly within a specified time range. The dial-number task is a preset task that allows users to configure background music, notifications, etc., and trigger it by dialing a number from a phone. The one-click task enables instant activation via the dispatch console's icon button.

No Server Needed

All ZYCOO IP Audio Solution's devices support Multicast and Peer-to-peer (P2P) to share data between devices without the need for a central server. While the devices are used in the same local network, multicast can distribute a single copy of data to an entire group of devices to achieve the broadcasting and paging features. In contrast, P2P provides the ability to call from a single device to another, achieving the feature.

Standard SIP

ZYCOO combines its years of experience in developing communication products, constantly innovates and breaks communication barriers, and integrates different communication products such as telephone, broadcasting, and intercom into the IP Audio Solution. Based on standard SIP protocol, ZYCOO IP Audio Solution is compatible with third-party endpoints or system products.

S Series Network Speaker

SC10 Network
Ceiling Speaker

SC15 Network
Ceiling Speaker

SW15 Network
Cabinet Speaker

SH10 Network
Horn Speaker

SH30 Network
Horn Speaker

SL30 Network
Column Speaker

ZYCOO SC10&SC15 Network Ceiling Speaker and SW15 Network Cabinet Speaker are high efficient, full-range drive units SIP-enabled speakers. Specially designed for indoor purposes, to provide premium sound quality, enhance the audience experience.

SH10 and SH30 are SIP-enabled horn speakers that provide exceptional voices for SIP paging, notification/tone broadcasting, and background music. They are suitable to be deployed in outdoor and other open spaces for public notifications and public safety purposes.

SL30 Network Column Speaker is PoE+ supported, it could cover a wide frequency band to provide high sensitivity, beautiful sound, and a unique listening experience for listeners. As well as the IP65-Enclosure makes the SL30 perfect to work in any outdoor environment.
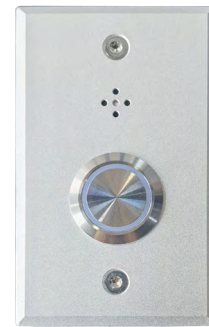
The ZYCOO EA-B11 Call Button with Microphone is an expansion accessory that integrates a microphone and an illuminated LED button.

When connected to designated models of ZYCOO network speakers, users can press the call button to dial a pre-configured destination number for two-way communication.

SIP — SIP Protocol

ONVIF — ONVIF

PoE — PoE

Built-in Amplifier

HD Voice

Auto Provisioning

	SC10 Network Celling Speaker	SC15 Network Celling Speaker	SW15 Network Cabinet Speaker	SH10 Network Horn Speaker	SH30 Network Horn Speaker	SL30 Network Column Speaker
Speaker Component	4" woofer unit + 1" tweeter unit	5.25" woofer unit + 1" tweeter unit	5.25" woofer unit + 1.5"tweeter unit	1.5"midrange driver unit	2"midrange driver unit	2* 3.25'' woofer units + 1'' tweeter unit
Power Input	PoE IEEE 802.3at or DC 12V-2A	PoE IEEE 802.3at or DC 24V-2A	PoE IEEE 802.3at or DC 24V-2A	PoE IEEE 802.3af/at or DC 24V-1A	PoE IEEE 802.3at or DC 24V-2A	PoE IEEE 802.3at or DC 24V-2A
Rate Power	8Ω 10W	8Ω 15W	8Ω 15W	8Ω 15W	8Ω 30W	4Ω 30W
Sensitivity	90dB/1m/1W	85dB/1m/1W	85dB/1m/1W	105dB/1m/1W	105dB/1m/1W	82dB/1m/1W
Max Sound Pressure Level	100dB	100dB	100dB	115dB	117dB	97dB
Frequency Range	70Hz – 20KHz	70Hz – 20KHz	70Hz – 20KHz	400Hz – 8KHz	400Hz – 8KHz	100Hz – 20KHz
IP Rating	/	/	/	IP66	IP65	IP65
Dimension	Ø150*205(mm)	Ø240*210(mm)	240*180*150(mm)	Ø220*235(mm)	Ø276*277(mm)	100*100*331(mm)
Weight	1.4KG	3.45KG	3.29KG	2KG	2.68KG	2.5KG

S Series Network Speaker

SQ10-B Network
Square Speaker

SQ10-T Network
Square Speaker

SQ10 Network Square Speaker is an indoor wall-mounted IP speaker, available in two models: SQ10-B and SQ10-T. Both models are equipped with a built-in microphone, allowing operators to engage in two-way communication.

Additionally, SQ10-T model features a programmable LCD screen that displays the date and time when in standby mode, eliminating the need for a separate clock system. SQ10-T also supports customizable text display for daily notifications, announcements, and alerts in emergencies. Its display-flashing feature enhances visibility, ensuring that important information is noticed promptly. This makes it ideal for use in business, education, healthcare, and other scenarios.

Lockdown

Intruder

Medical Emergency

Fire

Fire Alert

SIP	ONVIF	PoE	LCD Clock	Customizable Display Text	AI Voice Recognition
SIP Protocol	ONVIF	PoE	LCD Clock	Customizable Display Text	AI Voice Recognition

	SQ10-B Network Square Speaker	SQ10-T Network Square Speaker
Speaker Component	4.5" Full Range Driver Unit	
Power Input	PoE IEEE 802.3at or DC 24V-2A	
Rate Power	8Ω 10W	
Sensitivity	91dB/1m/1W	
Max Sound Pressure Level	101dB	
Frequency Range	70Hz~20KHz	
Display	/	1920*480 Hign Resolution Color LCD Display
Dimension	300*300*92(mm)	
Weight	3.25kg	3.5kg

VI Series Network Intercom

VI-A05
Network Intercom

VI-V05
Network Intercom

VI-D05
Network Intercom

The ZYCOO VI Series Network Intercom is a rugged, vandal-proof device, available in three models: the audio model VI-A05, the video model VI-V05, and the dual-button model VI-D05. VI Series support PoE and offers flexible installation options, including wall-mounting and flush-mounting (compatible with standard 2-Gang electrical boxes).

In access control and emergency call scenarios, visitors can establish two-way communication with the operator simply by pressing the call button. The operator can remotely grant access via telephone keypad. Additionally, the VI-V05 provides high-definition video calls, while the VI-D05 is equipped with dual buttons that can be configured for different call destinations to meet diverse communication needs.

All models in the VI Series are equipped with a tamper alarm mechanism. If the device is forcibly removed, a built-in buzzer will sound, which can trigger an alert to security personnel for immediate response.

SIP	ONVIF	PoE			
SIP Protocol	ONVIF	PoE	Vandal-Proof	Tamper Alarm	Access Control

	VI-A05 / VI-D05 Network Intercom	VI-V05 Network Intercom
Power Input	PoE(IEEE 802.3af/at)	
Rated Power	4Ω 5W	
Speaker Sensitivity	96dB ± 3/1m/1W	
THD(@1kHz)	<1%	
SNR(20kHz BW)	97dB	
Frequency Response	100Hz - 20KHz	
Microphone Sensitivity	-36 ± 3dB	
Video Resolution	/	1280*720@25fps
Dry Contact Output Connectors	1 x 2-Pin Phoenix Connector	
Mounting	Flush-mounted or Wall-mounted Installation	
Dimenslon	114*114*46 (mm)	
Weight	284g / 296g	294g

SD Series Network Power Amplifier

SD260
Network Power Amplifier

SD2140
Network Power Amplifier

The ZYCOO SD Series Network Power Amplifiers—comprising the SD260 and SD2140—are purpose-built for commercial audio applications, leveraging advanced Class-D amplification technology to deliver crystal-clear audio and outstanding reliability.

Both models support constant voltage and constant impedance speaker configurations. The SD260 delivers 2 × 60W or 1 × 120W (bridged), while the SD2140 offers higher output at 2 × 140W or 1 × 280W (bridged). Each model features a versatile range of inputs, including balanced/unbalanced line, Bluetooth, and network sources. With compatibility for SIP, Dante, and ONVIF protocols—no additional modules required—they offer a comprehensive, feature-rich solution.

Additionally, the amplifiers are equipped with a real-time adjustable mixer, an equalizer, and support scheduled playback via USB storage devices, making them ideal for scalable, intelligent audio deployments.

SIP Protocol	Dante	Bluetooth Audio Input	Event Scheduler	Equalizer	Mixer

|	SD260 Network Power Amplifier		SD2140 Network Power Amplifier	
SNR	85dB(20KHz BW)			
THD+N(@1kHz)	0.05%			
Audio Output Power	SE Mode: @ 100V 2 x 60W @ 25V 2 x 60W @ 4Ω(Min) 2 x 60W	BTL Mode: @ 100V Bridge 1 x 120W @ 75V Bridge 1 x 120W @ 25V Bridge 1 x 120W @ 8Ω(Min) Bridge 1 x 120W	SE Mode: @ 100V 2 x 140W @ 25V 2 x 140W @ 4Ω(Min) 2 x 140W	BTL Mode: @ 100V Bridge 1 x 280W @ 75V Bridge 1 x 280W @ 25V Bridge 1 x 280W @ 8Ω(Min) Bridge 1 x 280W
Audio Input	Balanced: 2 x 3-Pin Phoenix Connectors Unbalanced: 2 x RCA Jacks Bluetooth: 1 x IPX1 External 2.4G Antenna(BT 5.3 Compatible) Network: 1 x RJ45 Connector			
Dimensions	440*170*44(mm)			
Weight	2.75kg			

Network Paging Gateway

X10
Network Paging Gateway

The ZYCOO X10 Network Paging Gateway is a SIP enabled multifunctional intelligent IP voice communication terminal device. It can convert IP voice signal to analog audio signal and playout through the user's optional speaker output to achieve broadcast or two-way intercom and other IP voice communication functions.

X10 supports access to sensors, sound and light alarms, door magnets, and other peripheral devices to achieve a level of automatic control, security, and other functions, which can be widely used for smart and safe city applications, to increase the efficiency of communication and information sharing, as a result, to improve public safety and citizen welfare.

Smoke Detector — Speaker — Amplifier — Access Control — Infrared Probe — Alarm
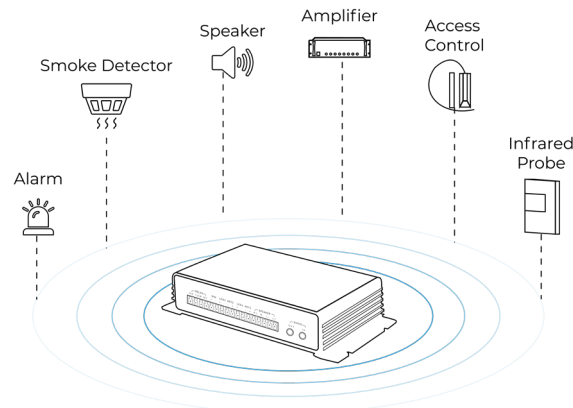
SIP Protocol	ONVIF	PoE	Two-way Intercom	Peripheral Integration	IP-to-Analog

X10 Network Paging Gateway	
Headset Output	3.5mm Jack
Microphone	3.5mm Jack
Volume Control	VOL+ and VOL-, press both to announce IP address
Power Input	DC 12V-3A Jack
Ethernet	ETH0+ETH1, 10/100Mbps, ETH0 with PoE IEEE 802.3at enabled
Dry Contact	NO/NC contacts, max AC 125V-1A, DC 60V-1A
Audio Codecs	G.722, G.711 A-law, G.711 U-law, Opus
Music Streaming	MP3 sampling rate 8 – 48KHz, bit rate 64 – 320kbps, mono or Stereo

Network Panic Button

PB-S11
Network Panic Button

The ZYCOO PB-S11 Network Panic Button is a reliable emergency device designed for quick response in critical. In the event of an emergency, users can press the button to initiate a silent emergency call to preset destinations. The PB-S11 supports outbound calls and allows up to 5 call destinations to be set. It automatically polls destinations when the device is busy, unanswered, or offline, ensuring call accessibility. Additionally, it is also suitable for daily scenarios requiring consultation or assistance.

The PB-S11 is characterized by its simplicity, quick response, and high reliability. It is powered via a PoE network cable and features flexible installation options, supporting both wall-mounted and flush-mounted (compatible with standard 1-Gang electrical boxes). It can be installed under desks, counters, or on walls. The PB-S11 also allows users to upload customized tones (such as device location information), which the recipient will hear the tones first. With these features, the PB-S11 is ideal for use in classrooms, banks, courtrooms, medical institutions, 24-hour restaurants, etc.

SIP Protocol	PoE	Failover Forwarding	Outgoing Call	Audio Message	Access Control

	PB-S11 Network Panic Button
Power Input	PoE (IEEE 802.3af/at)
Microphone Sensitivity	-36±3dB
Dry Contact Output Connectors	1 x 2-Pin Phoenix Connector
Mounting	Flush-mounted or Wall-mounted Installation
Ethernet	10/100Mbps Adaptive
SIP Audio Stream	MP3 Sampling Rate 8-48KHz, Bit Rate 64-320kbps, Mono or Stereo
Dimension	114*70*46(mm)
Weight	208g

Network Volume Controller

VC-Z01
Network Volume Controller

The ZYCOO VC-Z01 Network Volume Controller is a compact network audio control device that allows real-time volume adjustment of endpoint devices within a room or a zone via multicast. It features an automatic lock function to prevent unauthorized operation, ensuring secure usage.

Moreover, VC-Z01 supports scheduled volume control, enabling automatic volume adjustments based on time plans—ideal for scenarios requiring different volume levels at different times of the day.

It is powered via a PoE network cable and features flexible installation options, supporting both wall-mounted and flush-mounted (compatible with standard 1-Gang electrical boxes). VC-Z01 is ideal for use in classrooms, meeting rooms, offices, hotel rooms, and other indoor environments.

| PoE | Infinite Knob | Automatic Lock | Multicast Control | Event Scheduler | LED Status Indicator |

|	VC-Z01 Network Volume Controller
Power Input	PoE (IEEE 802.3af/at)
Microphone Sensitivity	-36±3dB
Dry Contact Output Connectors	1 x 2-Pin Phoenix Connector
Mounting	Flush-mounted or Wall-mounted Installation
Ethernet	10/100Mbps Adaptive
Dimension	114*70*46(mm)
Weight	210g

Network Dispatch Microphone Console

M100
Network Dispatch Microphone Console

The M100 Dispatch Microphone Console is a versatile and high-performance SIP-enabled device for seamless communication. It features 30 programmable fast keys that can be used for paging, intercom, music playback, outbound phone calls, and emergency alarm activation. With multicast and peer-to-peer technology, it serves as a standalone serverless console for individual and group paging, internal calls, and more. The console also allows users to save music and prerecorded messages in the local storage TF card, ensuring reliable and efficient communication capabilities.
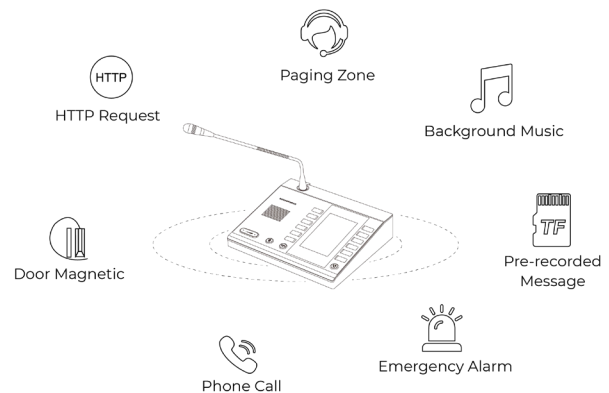
SIP Protocol	PoE	Server-less Paging	Event Scheduler	TF-Card	Peripheral Integration

	M100 Network Dispatch Microphone Console
TF Card	32GB
Power Input	DC 12V 1A or PoE IEEE 802.3af/at
Speed Dial Key	10 physical buttons (Use with the screen, support 10*3 rows of programmable buttons)
RS485	Half duplex
Speaker Max Sound Pressure Level	100dB
Speaker Sensitivity	95±3dB / 1W / 1m
Gooseneck Microphone Max Sound Pressure Level	110dB
Gooseneck Microphone Sensitivity	36±2dB
LCD Display Size	4.3 inches
LCD Display Resolution	480p*272p
Dimension	210*190*46(mm)
Weight	1.2KG

IP Audio Server

IAS-L100
IP Audio Server

IAS-L100 is a hardware server that pre-installed the ZYCOO IP Audio Center system, providing users the out-of-the-box feature to be ready to use. It can be used with ZYCOO speakers, intercoms, paging gateways, and other equipment to realize IP audio endpoints auto-provisioning and centralized management, mass notifications, background music, audio & video intercom, emergency broadcasting, audio conferencing, IP phone calling more features. In addition, with the use of SIP protocol, it supports third-party SIP-enabled endpoints and SIP system integrations.

HD Music

320Kbps superior quality MP3 music files and streamed media music supported, click to play music or scheduled music playing can be achieved. And different music for different zones is also supported.

SIP Paging

Support multiple ways for live paging by dialing a single device or a group number from an IP phone or a SIP microphone to initiate a live SIP paging and/or using the ZYCOO IP Audio Dispatch Console click and trigger paging.

Auto Provisioning

Using the MQTT IoT protocol, the IP Audio Center can auto-provision, manage, and control local or remote ZYCOO IP audio endpoints within one single system.

SIP Trunk

The IP Audio Center supports SIP trunks for integration and as a result, inbound and outbound phone calls are supported.

Video Linkage

IP cameras with RTSP support can be integrated with the IP Audio Center. Simply inputting the camera's RTSP address, and the system fetches the real-time streaming when an intercom call is initiated.

Audio Conferencing

ZYCOO IP Audio Center supports audio conferencing, and it can manage the conference using the IP Audio Dispatch Console. Invite, mute/unmute, kick out participants options are supported.

	IAS-L100 IP Audio Server
SIP Endpoints	100 (Max)
CPU	2.41GHz Intel Processor
RAM	4GB DDR3L
Storage	16GB EMMC + 240GB SSD
Ethernet Interface	2 x 10/100/1000Mbps
USB Interface	1 x USB3.0 + 1 x USB2.0
Rate Power	100~240V/50Hz
Dimension	440*232*44.5(mm), Standard 1U Rack
Weight	3.00KG

○ IP Audio Center

• ZYCOO IP Audio Center is the engine of ZYCOO IP Audio Solution. It is a software solution which can be installed on dedicated hardware or cloud- based servers.
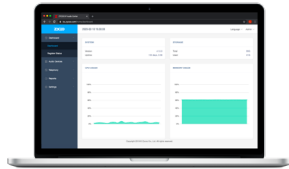
• The IP Audio Center manages all IP audio endpoints, including network speakers, intercoms, IP phones, SIP paging gateways, etc. Paging groups (zones), paging schedules, intercom calls, meetings, music/audio files are also managed by the IP Audio Center.

• For simplified control and distributed management, the IP Audio Center provides integration with ZYCOO IP Audio Dispatch Console and the IP Audio Dispatch App for users to manage different paging groups (zones) with different IP audio applications.

Key Features and Specifications	
SIP Accounts	4000 (Max)
Simultaneous Calls	500 (Max)
Simultaneous Conference Attendees	500 (Max)
SIP Paging	500 (Max)
MP3 Files	Unlimited
Playlists	128(Max)
Triggered Paging Tasks	Unlimited
Paging Groups (zones)	Unlimited
Recording Time	Unlimited (Wav format, 1MB/min)

○ IP Audio Dispatch Console

• ZYCOO IP Audio Dispatch Console is a multi-platform (Windows, MacOS and Linux) application dedicated for ZYCOO IP Audio Solution dispatch users.

• With the IP Audio Dispatch Console, dispatch users can broadcast background music, make live SIP paging, create scheduled paging tasks, start and manage audio conference calls, initiate emergency broadcast, monitor IP audio endpoints status and more.

• Multiple dispatch user login is supported and they can work separately without interfering with each other's paging zones. This feature makes the distributed multi-site IP audio system possible.

Key Features and Specifications	
Endpoints Status Monitoring	Supported
Paging	Supported
Alarm	Supported
Alarm List	Supported
Text-to-Speech (TTS) Paging	Supported
Prerecorded Message Paging	Supported
Volume Control	Supported
Tasks	Supported
Music Player	Supported
Log	Supported
Intercom	Supported
Meeting	Supported
Video Intercom Window	Supported

○ IP Audio Dispatch App

• IP Audio Dispatch App is a simple and easy to use mobile application developed for ZYCOO IP Audio dispatch users. The APP allows users of iPhone or Android based devices a mobile alternative to the PC based dispatch console.

• With the IP Audio Dispatch App, background music, pre-recorded message paging, emergency broadcasting and IP audio endpoint status monitoring can be configured and maintained.

• IP Audio Dispatch App is perfect for users who are on the go. It allows users to do the work instantly anywhere and any time.

Key Features and Specifications	
Endpoints Status Monitoring	Supported
Paging	Supported
Alarm	Supported
Alarm List	Supported
Text-to-Speech (TTS) Paging	Supported
Prerecorded Message Paging	Supported
Volume Control	Supported
Tasks	Supported
Music Player	Supported
Log	Supported

IP Audio Solution for Schools

ZYCOO IP Audio Solution for Schools provides a unified platform for daily announcements, scheduled bell ringing, paging, emergency alerts, intercom, visual notifications, and silent alarms. Designed for campus-wide communication and safety, the system ensures timely, efficient, and reliable audio-visual messaging across all school areas.
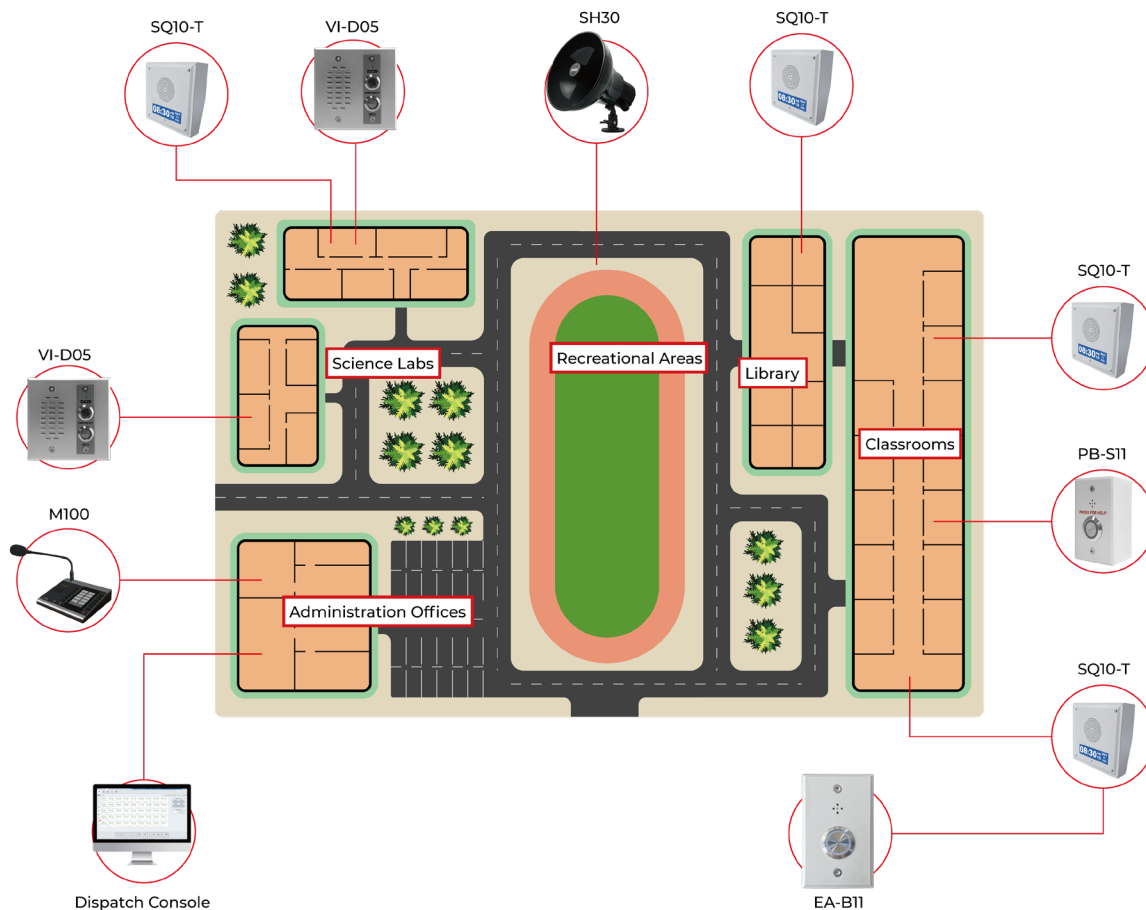
Emergency alerts for incidents or natural disasters

Intercom communication with the security room in emergency

Paging individuals from the broadcast room

Making announcements and notifications in playgrounds or academic buildings

Scheduling bells for daily classes

Playing soothing music during activities

IP Audio Solution for Hospitals

ZYCOO IP Audio Solution for Hospitals enables clear and efficient communication across medical facilities, supporting daily announcements, paging, emergency alerts, intercom, scheduled notifications, and remote access control for critical areas. Designed for reliability and responsiveness, the system enhances hospital operations, patient safety, and staff coordination.
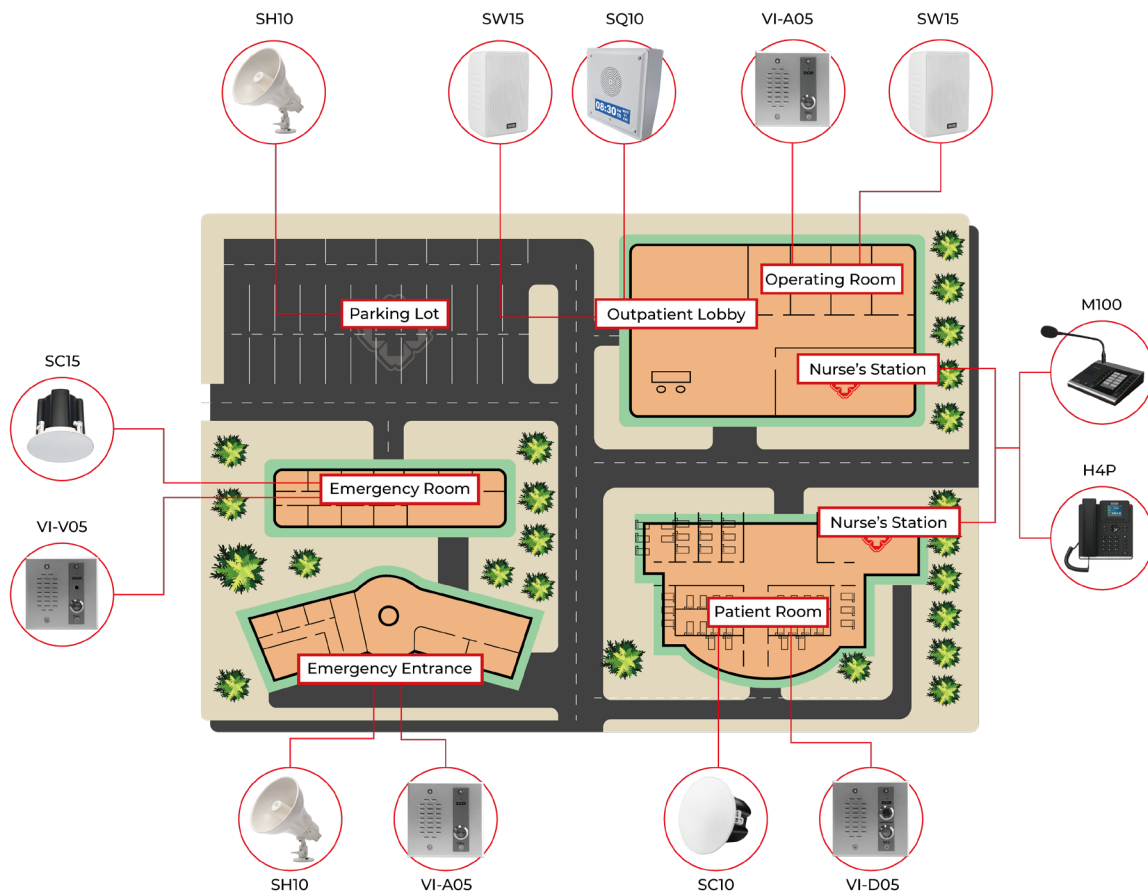
- Emergency communication for inpatients
- Visual notifications in the outpatient lobby
- Broadcast instructions in the patient areas
- Schedule timetable-triggered tasks to broadcast routine announcements
- Remote access control to enhance the safety of entry and exit in critical areas
- Play soothing music in the rehabilitation areas

FOCUS ON SECURITY, INNOVATION, AND BRILLIANCE

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