

SPON



Factory Audio System Solution



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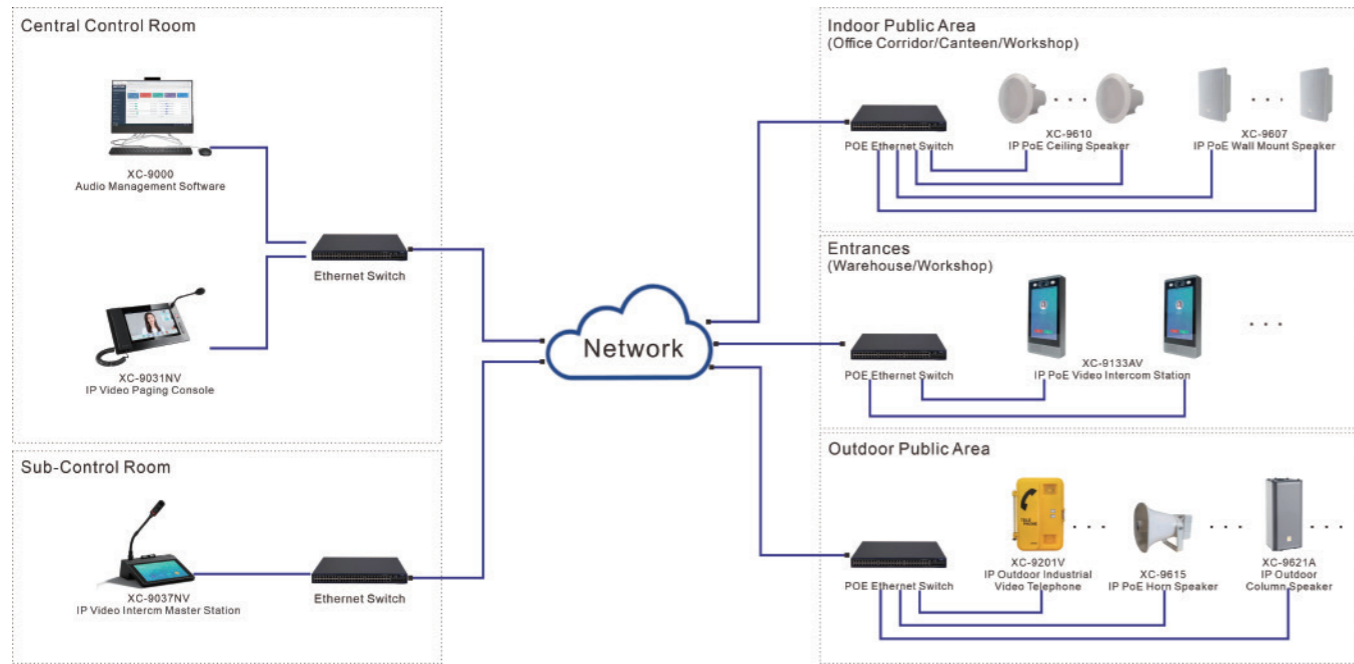
Instant Communication



Efficient Broadcasting



Enhanced Management



System Overview SPON IP Audio System

SPON's integrated Intercom & PA System for factories offers streamlined voice communication, broadcasting, and scheduling capabilities. Here's a concise breakdown of its components and features:

▲ **Control Center** Located at the management hub, the platform software centralizes control of intercom terminals and broadcast devices. It permits real-time monitoring of terminal statuses and facilitates voice dispatching and broadcast commands.

▲ **Intercom System** All intercom endpoints support bidirectional voice communication. This allows for immediate one-on-one or group voice dialogues.

▲ **PA System** Designed for broadcasting and urgent notifications, the PA devices can target specific factory zones or cover the entire facility, ensuring rapid information dissemination to all staff.

In essence, SPON's IP intercom and PA system enhance the factory's internal communication, **boosting both efficiency and safety standards.**

Solution Key Benefits Simplified and Efficient Audio Solutions



▲ Instant Communication

The system facilitates immediate voice conversations via intercom terminals, removing the latency found in traditional communication methods. This boosts efficiency and collaboration.

▲ Efficient Broadcasting

Targeted notifications can be sent to all staff or designated zones. Using the PA devices, crucial information is swiftly relayed, vital for ensuring swift responses, especially in emergencies.



▲ Enhanced Management

The system streamlines personnel and equipment oversight. The control center offers real-time insights into intercom locations and production states, optimizing operations and scheduling to elevate production quality and efficiency.

▲ Secure Communication

Given the sensitivity of factory information, the system employs encryption and secure channels. This ensures protection against unauthorized access, safeguarding business secrets and individual privacy.



Solution Applications

Versatile Applications of SPON Audio System

▲ 1. Easy Control Management Server & Paging Microphone in Central Room



1.1. Centralized Oversight

With the management platform, the monitoring center can seamlessly oversee and operate both the broadcast and intercom systems. This ensures real-time device status checks, quick fault identification, and remediation for optimal system reliability.

1.2. Flexible Broadcasting

The software allows for both scheduled background music and on-the-spot emergency broadcasts.

1.3. Instant Intercom

The monitoring center can easily initiate real-time communications with intercom terminals across different zones, supporting both individual and group conversations.

1.4. Emergency Integration

The system responds to fire alarms by initiating emergency broadcasts in the affected area, promoting swift evacuations.

▲ 2. IP Paging System for Sub-control room



2.1. Real-time and Effective Communication

Directly from the control room's microphone, achieve real-time messaging and initiate remote voice inter-coms.

2.2. Multi-party Communication

Facilitates multi-party interactions between the central control room and various endpoints like workshops, warehouse offices, and more.

▲ 3. Indoor Public Area

Installed with SPON IP indoor ceiling or wall-mounted speakers in the factory indoor areas such as corridors, manufacturing shop, canteen and other places, can be used for playing background music to enhance the cultural atmosphere on a daily basis, it also can be used for emergency notification.



▲ 4. Entrance and Exit Access Control

Installed with SPON Video two-way intercom endpoint at the entrances of factory manufacturing workshops or warehouses supports video calls for effective communication. Furthermore, these panels can be linked to door locks, allowing direct unlocking through the paging mic in the control room.

▲ 5. Outdoor Emergency Call Phone



SPON's IP horn speaker XC-9615, designed for outdoors, facilitates two-way intercom, essential for emergencies. Paired with SPON's one-touch emergency call phone in areas like factory parks and garages, direct alerts to control rooms or help centers are ensured. Integrated with alarm lights or PA speakers, it offers combined sound and light alerts during critical situations.

▲ 6. Outdoor Public Area



Installed with SPON IP outdoor speakers at factory outdoor public area can be used for playing background music to enhance the cultural atmosphere on a daily basis. Additionally, when integrated with cameras, it can enable alarm linkage for security purposes.

AUDIO MANAGEMENT PLATFORM
XC-9000



▲ KEY FEATURES

UNIFIED MANAGEMENT AND USER INTERFACE

- - **B/S software architecture:** centralized management of all IP intercom and PA devices.
- - **User-friendly web interface:** all critical system information displayed on the Dashboard.
- - **Versatile Events:** Creation and scheduling of timed events, alarm events, and customizable event combinations.
- - **Mobile app Management:** PA system management and user account management, including operation authority settings.

PA AND INTERCOM FLEXIBILITY

- - **Various Task Form:** Supports multiple real-time PA tasks using server sound card, files, terminals, and speech synthesis.
- - **Multiple Calling way:** User-defined call transfer, answer, and call priority settings.
- - **Online Database:** Upload functionality for audio files and pre-recorded messages to the media library.
- - **Seamless Compatibility:** Integration with third-party VOIP phones using SIP trunk for seamless VOIP system connection.

SYSTEM MONITORING AND INTEGRATION

- - **Operation Log:** Call-log and event-log recording and inquiry features for efficient monitoring.
- - **API Flexibility:** Standard HTTP API documentation to facilitate integration with other systems and third-party development.

NETWORK VIDEO INTERCOM MASTER STATION XC-9037NV



▲ TECHNICAL PARAMETERS

| | |
|-----------------------------|---|
| Power Supply | DC 12V/1.5A |
| Camera | 2MP |
| Video Codec | VGA/720/1080 |
| S/N (Signal-to-Noise) Ratio | ≥82dB |
| Audio Sampling & Bit Rate | 8kHz-44.1kHz, 16bit, 8kbps-320kbps |
| Frequency Response | 40Hz-18kHz |
| Network Protocol | SIP (RFC 3261), HTTP, TCP/IP, UDP, ARP, ICMP, IGMP |
| Configuration Method | Local Settings/Web Page |
| Mounting Method | Desktop |
| Interface | 1×RJ45 Ethernet Port, 1×USB 2.0, 1×Line Input, 1×Line Output, 1×Relay Input, 1×Relay Output |

▲ KEY FEATURES

INTERACTIVE DISPLAY AND CAMERA FEATURES

- **7-Inch Touchscreen:** User-Friendly Interface For Easy Interaction.
- **200W HD Camera:** Equipped With Physical Privacy Protection.

COMMUNICATION TECHNOLOGIES

- **Full-Duplex Visual Intercom:** Enables Effective Two-Way Visual Communication.
- **Noise Reduction Algorithm:** Enhances Audio Quality For Clearer Communication.
- **Remote Monitoring Capabilities:** Ability To Check The Status Of The Terminals, Including Login And Intercom Status.

BROADCASTING AND CUSTOMIZATION

- **Flexible Broadcasting Options:** Supports Broadcasts To All Areas, Specific Zones, Or Individual Terminals.
- **Multiple Broadcast Formats:** Including Audio Files, Pre-Recorded Messages, And TTS Options.
- **Emergency Broadcast System:** One-Touch PA Across All Terminals.
- **Customizable Ring Tones:** Personalize Ringtones For Calls And Broadcasts.

NETWORK HORN SPEAKER XC-9615



▲ TECHNICAL PARAMETERS

| | |
|-----------------------------|--|
| Power Supply | DC 24V/2.7A or PoE (IEEE802.3af) |
| Power Consumption | ≤65W |
| Rated Power Output | 30W(at DC 24V/2.7A powered) 22W (at PoE+ powered) 15W (at PoE powered) |
| Network Protocol | SIP 2.0 (RFC 3261), FTP, HTTP, TCP/IP, UDP, ARP, ICMP, IGMP |
| Maximum SPL | 97dB±3dB |
| S/N (Signal-to-Noise) Ratio | ≥80dB |
| Audio Encoding | MP3/PCM/ADPCM/G711.a/G711.u/G729 |
| Frequency Response | 100Hz-18kHz |
| Interface | 1×RJ45 Ethernet Port, 1×Power Input |
| IP Rating | IP65 |

▲ KEY FEATURES

CONNECTIVITY & SYSTEM INTEGRATION

- **Multicast Addresses:** 10 Multicast Addresses For Paging From SIP Phones.
- **Server Efficiency:** Multicast Scalability Saves SIP Account Resources.
- **SIP Compatibility:** Standard SIP Protocol For Easy Integration With Yeastar, Asterisk, Cisco.
- **Onvif Compatibility:** Onvif Protocol Compatible For Third-Party Monitoring System Integration.

AUDIO MANAGEMENT & NETWORK FUNCTIONALITY

- **Content Management:** Manages Background Music, Emergency Pages, And Alarms From SPON.
- **Adaptive Volume:** Dynamic Volume Control Adapts To Ambient Noise.
- **Power Option:** PoE/PoE+ Support For Versatile Installation.
- **Remote Management:** Remote Management And Online Upgrades.
- **Two-Way Intercom:** Two-Way Communication With SIP Telephones/Intercoms.

IP VIDEO INTERCOM PAGING CONSOLE XC-9031NV

▲ TECHNICAL PARAMETERS

| | |
|---------------------------|--|
| Power Supply | DC 12V/3.3A or PoE IEEE802.3af |
| Video Codec | VGA/720/1080 |
| Configuration Method | Local Settings/Web Page |
| Frequency Response | 25Hz~20KHz |
| Audio Sampling & Bit Rate | 8KHz~48KHz, 16bit/32bit |
| Network Protocol | SIP (RFC 3261), TCP, UDP, ARP, ICMP, IGMP, HTTP, RTP |



▲ KEY FEATURES

DESIGN & COMMUNICATION

- **Multifunctional Console:** Professional, versatile console supporting various installations (desktop, embedded, wall-mounted).
- **Interactive Touch Screen & Camera:** Equipped with a 10.2" TFT LCD touch screen and a 13MP HD camera for two-way video intercom.
- **Versatile Audio Options:** Built-in 3W speaker, unidirectional microphone, and Bluetooth connectivity for diverse intercom options, including hands-free and gooseneck microphone use.

BROADCASTING, CALLING, AND RECOGNITION CAPABILITIES

- **Zone-Wise PA:** Flexible paging broadcasting across different zones.
- **Diverse Calling Methods:** Offers Dial, Bookmarks, and Map calling modes.
- **Enhanced Security:** Intelligent face recognition for enhanced security.
- **Media Broadcasting and Conference Support:** Pre-recording and file broadcasting to specified terminals, along with full audio/video conference support.

NETWORK MONITORING AND EXTERNAL INTEGRATION

- **Comprehensive Network Monitoring:** Network state checks for each system terminal.
- **Emergency and Access Control:** Relay Input/Output interfaces for linking with emergency buttons, detectors, alarms, and electronic locks.
- **VoIP Integration:** SIP protocol compatibility for seamless integration with VoIP systems like Cisco, Asterisk, and Yealink.

IP POE VIDEO INTERCOM STATION XC-9133AV

▲ TECHNICAL PARAMETERS

| | |
|-----------------------------|--|
| Power Supply | DC24V/1A or PoE (IEEE802.3af) |
| Network Protocol | SIP 2.0 (RFC 3261), HTTP, TCP/IP, UDP, ARP, ICMP, IGMP |
| Audio Sampling Rate | 8kHz~44.1kHz, 16bit |
| Signal-to-Noise (S/N) Ratio | ≥84dB |
| Total Harmonic Distortion | <1% |
| Interface | 1×RJ45 Ethernet Port, 2×Relay Input, 2×Relay Output, 1×Power Input |



▲ KEY FEATURES

HIGH-QUALITY DISPLAY AND CAMERA

- **High-Resolution Touchscreen:** 7-inch high-definition capacitive touchscreen with 800×1280 resolution.
- **Advanced Camera Technology:** Built-in 2 MP low illuminance, wide dynamic dual camera.

ADVANCED COMMUNICATION AND CONNECTIVITY

- **Full Duplex Audio Processing:** Digital audio processor for full duplex communication with echo cancellation.
- **Versatile Calling Options:** Multiple call modes including double virtual buttons, virtual numerical dialpad, and call list.
- **Independent Operation:** Offline calling capabilities without server dependency.
- **SIP Protocol Integration:** Standard SIP protocol support for easy integration with mainstream SIP PBX systems (Yeastar, Asterisk, Cisco, etc.).

SYSTEM INTEGRATION AND OUTDOOR SUITABILITY

- **Flexible Connectivity:** Relay I/O port for connecting to third-party external equipment.
- **Remote System Management:** Remote management and online upgrading features.
- **Outdoor-Ready Design:** Designed for outdoor use with a protection level of IPX5.

NETWORK CEILING SPEAKER XC-9610



▲ TECHNICAL PARAMETERS

| | |
|-------------------|---|
| Power Supply | DC 24V/1A or PoE (IEEE802.3af) |
| Network Protocol | SIP 2.0 (RFC 3261), FTP, HTTP, TCP/IP, UDP, ARP, ICMP, IGMP |
| Audio Encoding | MP3/PCM/ADPCM/G711.a/G711.u/G729 |
| Power Consumption | ≤25W |
| Maximum SPL | 97dB±3dB |
| Interface | 1×RJ45 Ethernet Port, 1×Power Input |

▲ KEY FEATURES

PERFORMANCE AND ENCODING

- - **High-Speed Processing:** Employs a high-speed, industrial-grade dual-core (ARM+DSP) chip for superior processing power.
- - **Clear Voice Encoding:** Features versatile voice encoding with both narrowband (G.711a/u) and broadband (G.722) options for crystal-clear voice paging.

CONNECTIVITY & SYSTEM INTEGRATION

- - **SIP Phone Paging Support:** Supports receiving paging from SIP phones through 10 dedicated multicast addresses.
- - **Efficient Multicast Scalability:** Incorporates a multicast scalable function, efficiently saving SIP account resources.
- - **SIP Protocol Integration:** Fully compatible with standard SIP protocols for seamless integration with leading SIP PBX systems like Yeastar, Asterisk, and Cisco.

AUDIO MANAGEMENT & NETWORK FUNCTIONALITY

- - **Versatile Audio Functions:** Facilitates background music, emergency paging, and alarm signals from the SPON management system.
- - **Adaptive Volume Control:** Features dynamic volume control that automatically adjusts based on ambient noise.
- - **Flexible Network Power Options:** Offers flexible deployment with PoE or PoE+ interface support.

NETWORK WALL-MOUNTED SPEAKER XC-9607



▲ TECHNICAL PARAMETERS

| | |
|---------------------------------|--|
| Power Supply | DC 24V/1A or PoE (IEEE802.3af) |
| Rated Power Output | 20W (at DC 24V/1A powered) 15W (at PoE powered) |
| Network Protocol | TCP/IP, UDP, ARP, ICMP, IGMP |
| Maximum SPL | 97dB±3dB |
| Frequency Response | 100Hz-18kHz |
| Operating Temperature, Humidity | -20°C to 50°C, 10% to 90% RH (non-condensing) |

▲ KEY FEATURES

PERFORMANCE AND ENCODING

- - **High-Speed Processing:** Employs a high-speed, industrial-grade dual-core (ARM+DSP) chip for superior processing power.
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CONNECTIVITY & SYSTEM INTEGRATION

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AUDIO MANAGEMENT & NETWORK FUNCTIONALITY

- - **Versatile Audio Functions:** Facilitates background music, emergency paging, and alarm signals from the SPON management system.
- - **Flexible Network Power Options:** Offers flexible deployment with PoE or PoE+ interface support.
- - **Remote Management:** Equipped with remote management and online upgrading capabilities for ongoing system optimization.

NETWORK OUTDOOR WALL MOUNT SPEAKER XC-9621



▲ TECHNICAL PARAMETERS

| | |
|---------------------------------|--|
| Power Supply | DC 24V/1.5A or PoE (IEEE802.3af) |
| Rated Power Output | 30W (at DC 24V/1A powered) 15W (at PoE powered) |
| Network Protocol | TCP/IP, UDP, ARP, ICMP, IGMP |
| Maximum SPL | 97dB±3dB |
| Power Consumption | ≤3W (Standby) |
| Operating Temperature, Humidity | -20°C to 50°C, 10% to 90% RH (non-condensing) |
| Frequency Response | 100Hz-18kHz |

▲ KEY FEATURES

ELEGANT DESIGN & STRONG BUILD

- - **Compact Wall-Mount Structure:** Stylish and suitable for various environments.
- - **Aluminum Casing:** Durable, waterproof, and designed for diverse settings.

ADVANCED SOUND TECHNOLOGY

- - **Built-in Class-D Amplifier:** Delivers up to 30W for powerful sound.
- - **Versatile PA:** Supports network broadcasting, local amplification, and Bluetooth connectivity (APP required).

CONNECTIVITY AND CONTROL

- - **RJ45 Port:** Ensures easy network access across segments and routers.
- - **Dual Management Modes:** Network and Bluetooth configuration options available (APP needed).
- - **Alarm Input:** Triggers server tasks for immediate alerts and announcements.
- - **Remote Management:** Equipped with remote management and online upgrading capabilities for ongoing system optimization.

IP INDUSTRIAL VIDEO PHONE BOX XC-9201V



▲ TECHNICAL PARAMETERS

| | |
|-----------------------------|--|
| Power Supply | DC 24V/2.7A or PoE (IEEE802.3af) |
| Network Protocol | SIP 2.0 (RFC 3261), HTTP, TCP/IP, UDP, ARP, ICMP, IGMP |
| Audio Sampling Rate | 8kHz-44.1kHz, 16bit |
| Power Consumption | ≤65W |
| Video Transmission Bit Rate | 16Kbps-2Mbps |
| Video Coding | GVA/720/1080P |
| Transmission Bit Rate | 8kbps-320kbps |
| S/N (Signal-to-Noise) Ratio | ≥90DB |
| IP Rating | IP66 |
| Interface | 1×RJ45 Ethernet Port, 1×Relay Output, 2×Speaker Output (8Ω), 1×Power Input |

▲ KEY FEATURES

ENHANCED DESIGN AND FUNCTIONAL FEATURES

- - **Aluminum Alloy Construction:** Wall-mounted, paint-coated casing with resistance to dust, noise, explosions, and corrosion.
- - **Efficient Dialing System:** Numeric keypad for full-duplex intercom with any terminal.
- - **Emergency Calling:** Quick-access button for one-touch calls to preset destinations.
- - **Offline Intercom Support:** Functions without a server for offline communication.

ADVANCED CONNECTIVITY AND CONTROLS

- - **Versatile Output Ports:** Alarm and amplifier outputs for connecting alarms and speakers.
- - **Broad Network Compatibility:** Easily connects via Ethernet, supporting cross-segment and router functionality.
- - **POE Enabled:** Power Over Ethernet support for streamlined power supply.