SPON

Hospital
Audio System
Solution

Emergency Assistance | Real-time Communication | Real-time Announcements

Control Room

XC-9000
Audio Management Software

XC-9037NV
IP Video Intercom Master Station　　10/100Mbps Ethernet Switch

Conventional/Addressable Fire
Alarm system

NAC-5003
IP Fire Alarm Interface Unit

Floor Nurse Station

XC-9037NV
IP Video Intercom Master Station

LAN

Payment Counter/Pharmacy Window

DWT-6502A
IP Window Intercom
Internal Unit

DWT-6502B
IP Window Intercom
External Unit

Ward

NAS-8515
IP Audio Intercom Station　　Emergency Button

Indoor Public Area

XC-9610
IP PoE Ceiling Speaker

NAS-8523DV
IP PoE Video
Intercom Station

Outdoor Public Area

XC-9615
IP PoE Horn Speaker

Legend:
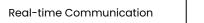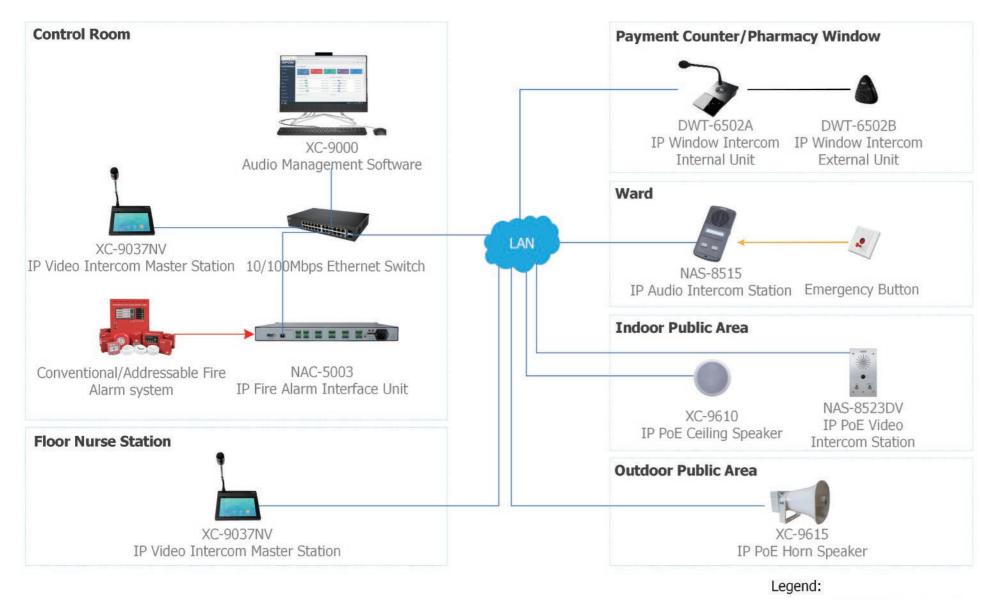——— Cat5/6 Network cable

Solution Key Benefits
Simplified and Efficient Audio Solutions

▲ Emergency
Assistance

In case of emergencies such as patient agitation, altercations, self-harm, or falls, relevant personnel can utilize the IP Intercom terminals to make one-click emergency calls for assistance.

▲ Real-time
Communication

Nurses' stations on different floors can engage in two-way visual communication through IP Video Intercom Master Station. The system supports multi-party calls, facilitating communication and coordination among medical staff.

▲ Fire Broadcastin

The system can integrate with the fire alarm system. In the event of a fire or other emergencies, it automatically broadcasts warnings and evacuation instructions to the entire area or specific zones. Leaders can also manually initiate emergency broadcasts with a single click.
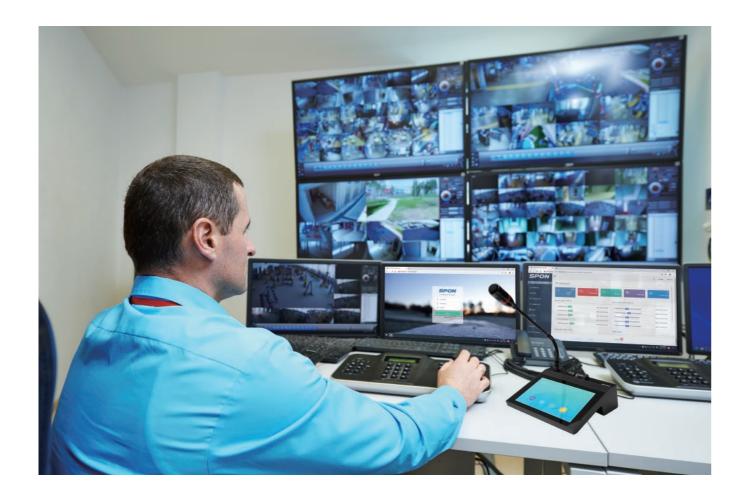
▲ Real-time
Announcements

During routine operations, hospital departments can use the PA system to direct relevant departments based on the situation. For example, when an emergency patient arrives, the PA system can quickly notify relevant medical staff for prompt treatment.

▲ Audio and
Video Recording

The system includes audio and video recording capabilities, automatically documenting broadcast and intercom content. This feature facilitates subsequent work discussions and assessments within the hospital.

System Overview
SPON IP Audio System

In a hospital, being a unique and complex environment with intricate operational and management needs, the Hospital IP PA and Intercom System has become an indispensable tool. This system plays a crucial role in achieving efficient internal communication and ensuring safety and security measures. It is vital for hospitals to excel in their operations, save time, guarantee safety, and minimize losses.

Solution Applications
Versatile Applications of SPON Audio System

▲ 1. Control Room

1.1. Deploy Audio Management Software to centrally manage data exchange, status monitoring, and audio-video recording for all IP PA and Intercom devices within the system.

1.2. Deploy IP Video Intercom Master Station for broadcasting announcements and responding to emergency calls from IP Intercom terminals at various locations (such as payment counters, pharmacy windows, wards, and indoor public areas).

1.3. Deploy IP Fire Alarm Interface Unit to integrate with the fire alarm system, enabling seamless coordination between the IP PA and intercom system and the fire alarm system.

▲ 2. Floor Nurse Station

Deploy IP Video Intercom Master Station for broadcasting announcements and responding to emergency calls from IP intercom terminals within this floor (such as payment counters, pharmacy windows, wards, and indoor public areas).

▲ 3. Payment Counter/Pharmacy Window

Deploying IP Window Intercom Kit allows healthcare professionals to make one-click emergency calls for assistance through IP intercom terminals in case of urgent situations, such as patient agitation or altercations. This system facilitates quick communication and seeking help during emergencies at service points like payment counters or pharmacy windows.

▲ 4. Ward

Deploying IP Audio Intercom Station in patient rooms and placing emergency buttons in bathrooms allows patients to make one-click emergency calls for assistance in case of urgent situations, such as falls. This setup enables patients to seek help quickly either through IP Intercom terminals or emergency buttons, improving response times during emergencies.

▲ 5. Indoor Public Areas

1.1. Deploy IP PoE Video Intercom Station on corridor walls. In the event of emergencies such as patient agitation, altercations, or self-harm, relevant personnel can make one-click emergency calls through the IP intercom terminals to seek help.

1.2. Install IP PoE Ceiling Speakers on corridor ceilings. In the event of a fire, these speakers receive warning and evacuation instructions. Additionally, during work directives from leadership, they can receive instructions through the speakers.

▲ 6. Outdoor Public Area

Deploy IP PoE Horn Speakers to broadcast evacuation messages to surrounding vehicles when emergency patients arrive. This helps in efficiently managing the traffic and gaining valuable time for the treatment of the patient.

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.

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.

IP WINDOW INTERCOM KIT
DWT-6502AB

▲ TECHNICAL PARAMETERS

Power Supply	DC 12V/1.5A
Network Protocol	TCP/IP, UDP, ARP, ICMP, IGMP,FTP
Audio Codec	PCM/AAC
Audio Sampling Rate	8kHz-32kHz
S/N (Signal-to-Noise) Ratio	≥90dB
Interface	1×RJ45 Ethernet Port, 1×Power Input , 1×Recording Port , 1× external and internal connector

▲ KEY FEATURES

DESIGN & USABILITY ENHANCEMENTS

· **- Touch button:** Features a noiseless, full-touch button design for easy cleaning and disinfection.

· **- Cable Management:** Integrated system for a neat, clutter-free workspace.

· **- Sleek Metal Design:** Professional cavity structure that prevents resonance for enhanced device performance.

AUDIO QUALITY & TAILORED SETTINGS

· **- Advanced Sound Technology:** Intelligent sound source detection with ambient noise reduction and automatic volume adjustment.

· **- Customizable Audio Modes:** Three scene modes to fine-tune audio quality in different environments.

· **- Pure Sound Output:** Specialized design ensures natural and undistorted sound.

CONNECTIVITY & OPERATIONAL FUNCTIONALITY

· **- Unified Cable Solution:** Combines power, network, and recording functionalities in one cable.

· **- FTP Voice Messaging:** Supports personalized voice messages for improved customer interaction.

· **- Recording Output Interface:** Facilitates integration with third-party devices.

IP VIDEO INTERCOM STATION
NAS-8523DV

▲ 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
Power Consumption	≤30W
Audio Sampling Rate	8kHz-22.05kHz, 16bit
Transmission Bit Rate	512Kbps-4Mbps
S/N (Signal-to-Noise) Ratio	≥82dB

▲ KEY FEATURES

PANEL DESIGN

· - **Material:** 6mm thick aluminum panel with anti-stab protection.
· - **Security Features:** Special screws to prevent vandalism.
· - **Button Configuration:** Dual buttons for emergency call and information inquiries, supporting full-duplex communication.

AUDIO AND VIDEO CAPABILITIES

· - **Built-in Speaker and Microphone:** 3W speaker and mic for receiving broadcasts and hands-free communication.
· - **Digital Audio Processing:** Enhances noise reduction, improves audible range and sound quality.
· - **Crystal-Clear Camera :** 1080P HD camera with adaptive imaging for clear visuals in any lighting condition.

SECURITY FEATURES

· - **Tamper Alarm:** Automatic alert to management software upon forced disassembly.
· - **Alarm System Integration:** Includes one alarm output for controlling lights or locks, and one input for connecting additional alarms or sensors.

CONNECTIVITY AND NETWORKING

· - **SIP Support:** Standard open SIP signaling for independent VOIP system integration.
· - **POE Support:** Equipped for Power Over Ethernet supply.
· - **Network Accessibility:** Standard RJ45 interface for easy connection across various network segments and routers.

IP PAGING INTERCOM
NAS-8515

▲ TECHNICAL PARAMETERS

Power Supply	DC 12V/1.5A
Network Communication Protocol	TCP/IP, UDP, SIP, ARP, ICMP, IGMP
Network Chip Rate	10/100Mbps
Operating Temperature	0ºC to 45ºC
Humidity	≤90%RH (non-condensing)
Audio Sampling Rate, Bit Rate	8kHz to 22.050kHz, 16bit, 16kbps to 352kbps

▲ KEY FEATURES

DESIGN AND ACCESSIBILITY

· - **Compact & Versatile:** Suitable for tabletop or wall mounting with LCD status display.
· - **Dual Button:** Two buttons for personalized calling or broadcasting. Press any key to call the server-configured target.
· - **Effortless Communication:** Full-duplex intercom, equipped with a 3W speaker and microphone for hands-free calls and broadcast reception.

AUDIO CONNECTIVITY AND EMERGENCY RESPONSE

· - **Headset Compatibility:** Equipped with 3.5mm audio line output and microphone input ports, supporting headset compatibility.
· - **Emergency Integration:** Alarm Input/Output for seamless connection with emergency systems, including buttons, detectors, and locks.

NETWORK COMPATIBILITY AND COMMUNICATION

· - **Offline Intercom:** Supports offline intercom without centralized server software.
· - **Support SIP:** Compatible with SIP for IPPBX registration, expanding communication options.
· - **Network Accessibility:** Standard RJ45 interface for Ethernet connectivity, adaptable across network segments and routers.