



IP BASED PA SOLUTION

FOR EDUCATIONAL
INSTITUTIONS

www.nordencommunication.com

Overview

An IP PA (Public Address) and Intercom Solution for Educational Institutions is an effective communication system designed to enhance the safety, communication, and operational efficiency of schools, colleges, and universities. It uses Internet protocol (IP) technology to integrate and streamline announcements, intercom calls, and emergency notifications across the campus.



■ Key Features of IP Based PA and Intercom Solutions for Educational Institutions:

- **Campus-Wide Communication:**

IP PA systems allow announcements to be broadcast across the entire school or selected zones, like classrooms, hallways, or auditoriums, ensuring everyone hears important messages.

- **Intercom System for Two-Way Communication:**

The intercom feature enables direct, two-way communication between classrooms, administrative offices, and security desks. Teachers can request assistance, and administrators can quickly communicate with staff in different areas of the campus.

- **Emergency Alerts and Notifications:**

IP-based systems can send instant emergency alerts (fire alarms, lockdowns, evacuations) across the entire campus, including audio, visual, and text-based notifications. This is crucial for enhancing student and staff safety during emergencies.

- **Remote Management and Monitoring:**

The system can be managed remotely through a web interface, allowing administrators to control announcements, monitor system status, and address issues from anywhere with an internet connection.



- **Scalability**

IP systems are highly scalable, making them suitable for both small schools and large campuses. You can easily add more speakers, intercom stations, or zones as the institution grows.

- **Scheduled Announcements:**

Administrators can schedule automated announcements for routine activities, such as class start/end bells, event reminders, or school-wide notifications, ensuring punctuality and efficient time management.

- **Cost-Effective**

Since the system uses existing IP networks, it reduces the need for extensive wiring and additional infrastructure, lowering installation and maintenance costs.

- **Zone-Based Announcements**

IP systems can target specific zones or areas of the school for different announcements. For example, you can send messages to just the sports hall, auditorium, or specific classrooms, rather than the whole campus.

- **High-Quality Audio and Video Communication:**

The IP system delivers clear audio communication, reducing distortion and interference. Some systems also support video intercom for enhanced security and communication, especially at entry points like gates and main doors.



■ Benefits of IP Based PA and Intercom Solutions in Educational Institutions:

● Enhanced Safety

In emergency situations, immediate communication is crucial. By implementing a robust notification system, schools can send real-time alerts to students, staff, and emergency responders. This could include lockdown alerts, evacuation notices, or updates during severe weather events. Integration with existing security systems, such as surveillance cameras and access controls, further enhances safety by allowing for coordinated responses. This proactive approach not only protects individuals but also fosters a sense of security within the campus community.

● Efficient Campus Operations

Scheduled announcements and streamlined communication help to ensure that everyone is on the same page. For example, automated alerts for class changes, facility issues, or schedule adjustments can minimize confusion and keep students and staff informed. By reducing the time spent on manual communication methods, institutions can improve overall time management and productivity. This efficiency can lead to fewer operational delays, allowing for smoother transitions throughout the school day.



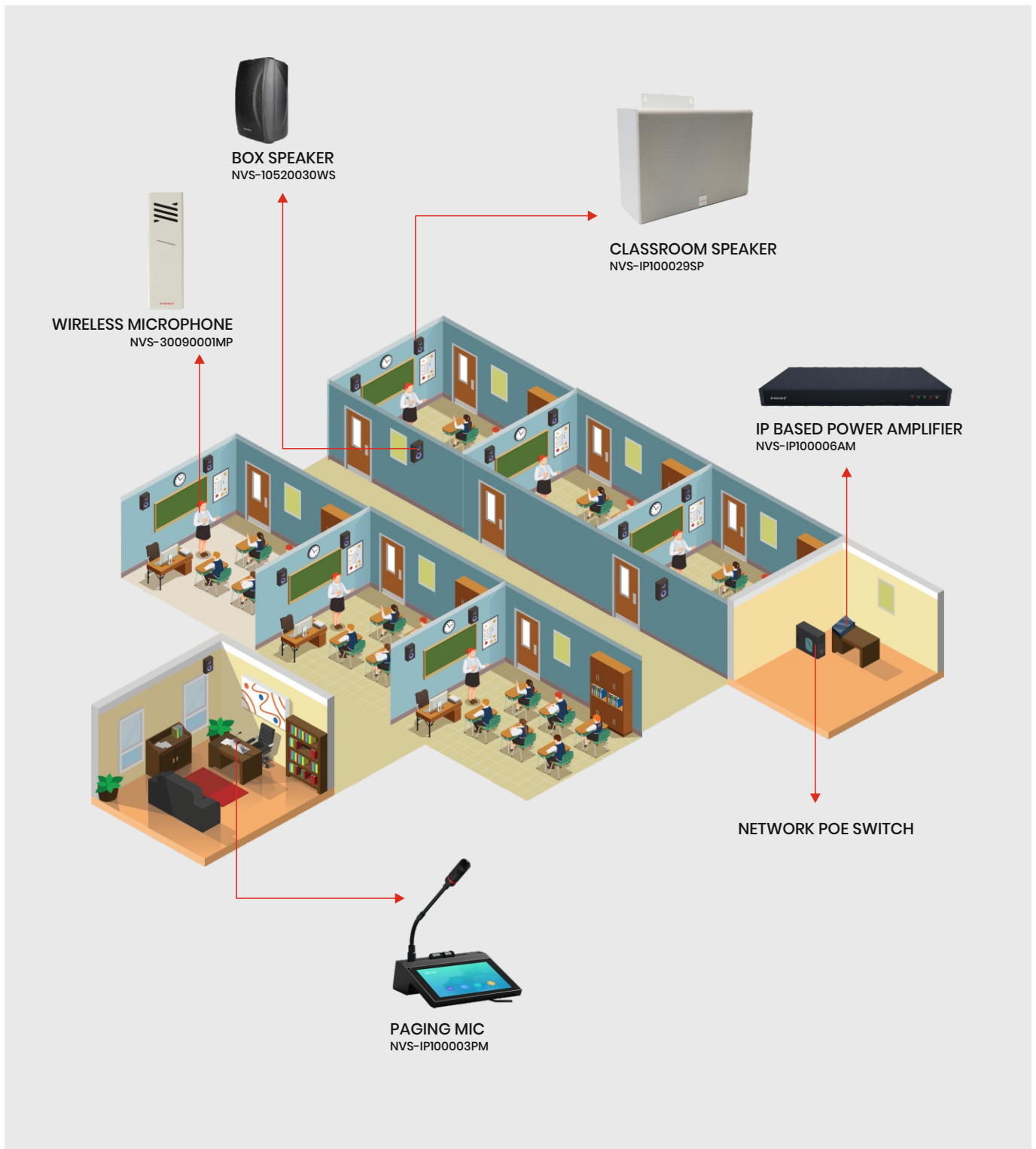
● Flexible and Scalable

As educational institutions expand—whether by adding new buildings, classrooms, or departments—the communication system must be able to grow alongside them. A flexible system can easily incorporate new technologies or features, ensuring that all areas of the campus are connected. This scalability not only supports the current needs of the institution but also future-proofs it against changes in size or structure, allowing for continuous improvement and adaptation.

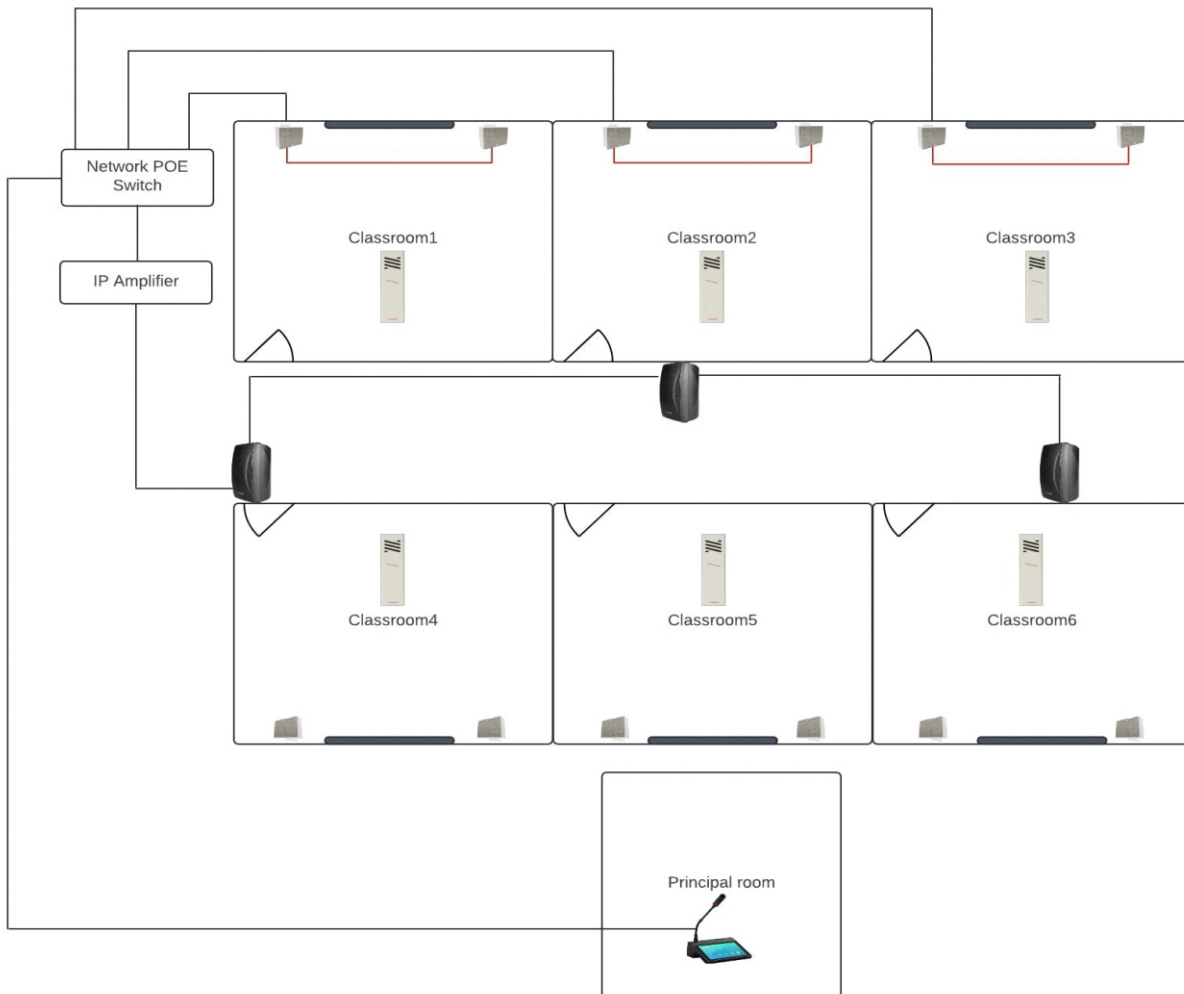
● Improved Learning Environment

Clear and effective communication during school hours is essential for maintaining focus and ensuring that both students and teachers can perform at their best. With reliable channels for disseminating information, students are less likely to miss important announcements or updates. This clarity contributes to a more organized and conducive learning environment, allowing educators to concentrate on teaching rather than managing confusion. Ultimately, an informed community enhances engagement and academic performance.

■ Schematic Diagram



■ Single Line Diagram



Classroom Speaker
(NVS-IP100029SP)



Paging mic
(NVS-IP100003PM)



Box Speaker
(NVS-10520030WS)

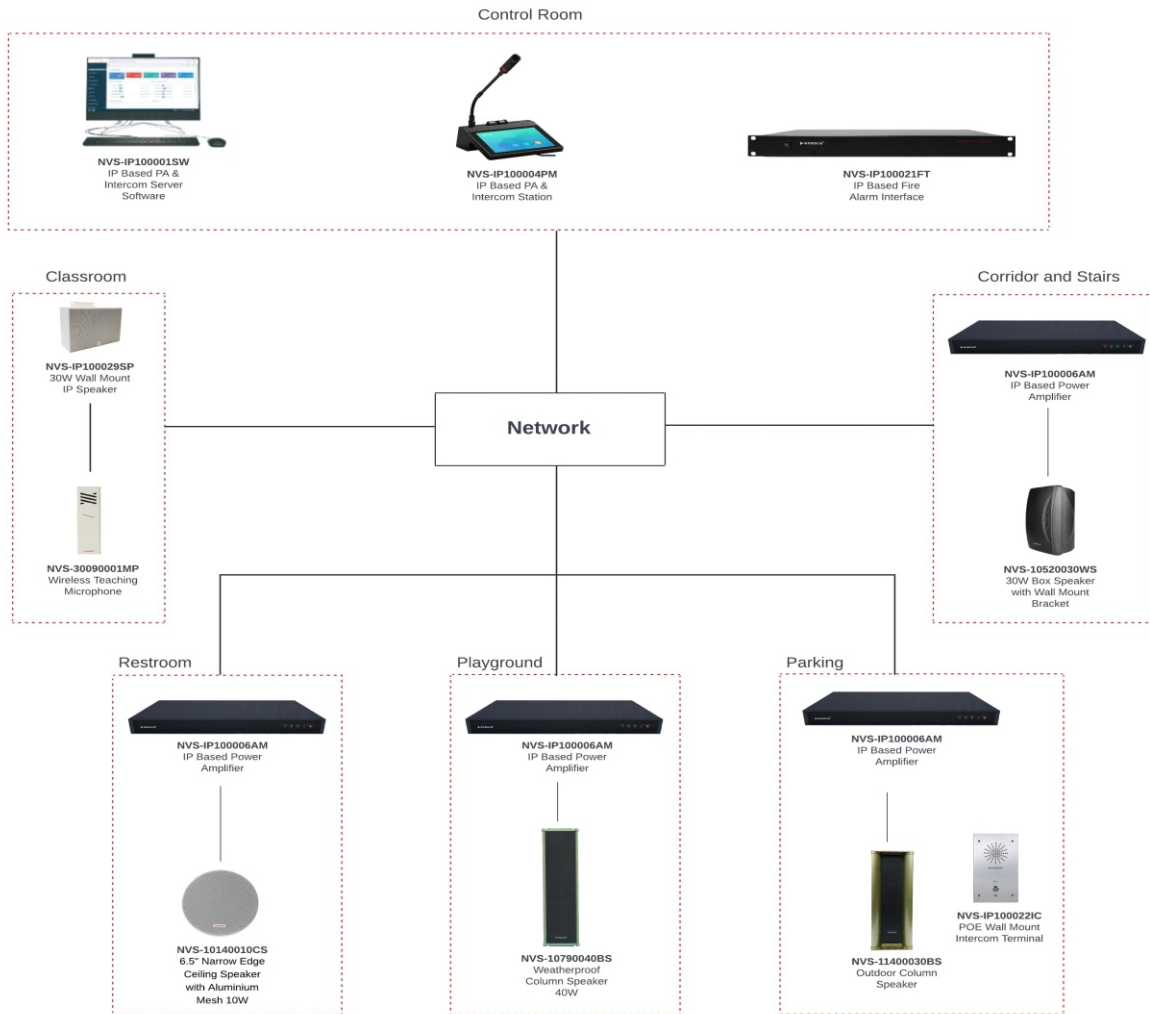


Wireless Microphone
(NVS-30090001MP)



Door

Deployment Diagram



■ Product Details

■ 30W WALL MOUNT IP SPEAKER

NVS-IP100029SP

■ All-in-One Device

Combines a network audio decoder, digital amplifier, and DSP for streamlined functionality.

■ Built-In 5" Woofer and 3" Tweeter

Delivers high-quality sound with a powerful woofer and crisp tweeter.

■ Built-In Clock Chip with NTP Automatic Timing

Ensures precise timekeeping for scheduled announcements.

■ Remote Management and Online Upgrades

Allows easy management and updates from a remote location.

■ Standard SIP Protocol Support

Integrates seamlessly with PBX systems for advanced communication.

■ Local Broadcasting via UHF Wireless Microphone

Enables wireless microphone use for local announcements without additional equipment.

■ Offline Broadcasting with High-Capacity Internal Flash

Supports pre-recorded announcements even when the network is down.



■ WIRELESS TEACHING MICROPHONE

NVS-30090001MP

■ Connectivity with NVS-IP100029SP

Easily integrates with the NVS-IP100029SP for enhanced functionality.

■ Equipped with Headset

Includes a headset for clear and convenient communication.

■ Supports Type-C Connector

Modern Type-C connection for faster and more reliable data transfer.

■ Up to 15 Meter RF Range

Provides a robust wireless communication range of up to 15 meters for flexible use.



■ IP SMART CLASSROOM SPEAKER

NVS-IP100045SP

The **IP Classroom Speaker** is a versatile audio solution designed for classrooms and meeting spaces, featuring dual arc formation, support for two wireless microphones, and high-quality sound with advanced processing. Easy to mount on ceilings or brackets, it connects effortlessly to external audio sources and additional speakers, making it perfect for enhancing any learning environment.

■ Sleek Compact Design

Perfectly fits any space without compromising on sound quality.

■ Bluetooth 5.0

Enjoy seamless connections with all your favorite devices.

■ Embedded DSP Processor:

Experience precise audio tuning with a customizable 8-band EQ for personalized sound.

■ Network Broadcast Support

Easily integrate optional broadcast modules for efficient daily announcements.

■ User-Friendly Management

Control via intuitive web-based interfaces or mobile apps for ultimate convenience.



■ INTEGRATED WIRELESS TRANSMITTER WITH MIC

NVS-30030005MP

■ Wireless High-Quality Audio Transmission

Ensures clear and uninterrupted sound for announcements and events.

■ Transmission Frequency: 730-780 MHz

Operates within a reliable frequency range for stable performance.

■ Portable System

Easy to move and set up, ideal for various school locations.

■ Simple Pairing Technology

Quick and hassle-free connectivity for efficient use.



■ WIRELESS ACTIVE WALL MOUNT SPEAKER 8W

NVS-11250030MS

■ Compatible with NVS-30030005MP

Easily pairs with the NVS-30030005MP for enhanced system integration.

■ Equipped with RF Receiver

Facilitates reliable wireless communication and signal reception.

■ Separate Drivers for LF and HF

Optimized sound quality with dedicated low-frequency (LF) and high-frequency (HF) drivers.

■ Supports Long-Distance Transmission

Constant voltage power amplifier enables efficient audio transmission over long distances.

■ Supports Various Audio Resources

Flexible input options to accommodate multiple audio sources for diverse needs.





IP SPEAKERS

■ IP/SIP POE WALL MOUNT SPEAKER

NVS-IP100016SP

- Automatic volume control
- Built-in Microphone for dynamic volume control that automatically adjusts based on ambient noise
- Configured for playing scheduled tasks from the server
- Power rating:
 - 20W (DC 24V/1A Powered)
 - 18W (at PoE + Powered)
 - 15W (at PoE Powered)
- SIP supported



■ IP/SIP CEILING SPEAKER

NVS-IP100017SP

- Ambient noise sensing
- Built-in Microphone for dynamic volume control that automatically adjusts based on ambient noise
- Configured for playing scheduled tasks from server
- Power rating:
 - 20W (DC 24V/1A Powered)
 - 18W (at PoE + Powered)
 - 15W (at PoE Powered)
- SIP supported



■ **IP/SIP COLUMN SPEAKER**

NVS-IP100018SP

- 30W power rated
- Support Web-based control
- Waterproof structure, with IPX5 protection grade
- Scheduled announcements



■ **IP/SIP COLUMN SPEAKER**

NVS-IP100019SP/NVS-IP100020SP

- 60W/120W power rated
- Support Web-based control
- Scheduled announcements
- Waterproof structure, with IPX5 protection grade



■ **IP/SIP POE HORN SPEAKER**

NVS-IP100015SP

- Network Based design
- Power Rating:
 - 30W (DC 24V/1A Powered)
 - 22 W (at PoE + Powered)
 - 15W (at PoE Powered)
- Support SIP protocol
- Automatic Volume level control
- Ip65 Protection
- Built in digital signal processor



■ **IP POE HORN SPEAKER**

NVS-IP100043SP

- 10W power rated
- Max SPL: 120dB
- Supports SIP Protocol
- Supports both POE and POE+
- Ip66 Protection
- Waterproof microphone with dynamic volume adjustment





IP INTERCOMS

■ POE WALL MOUNT INTERCOM TERMINALS

NVS-IP1000221C

- Built-in 3W speaker and microphone
- Compatible with SIP protocol
- Supports offline calling
- Standard RJ45 interface
- Line-output interface for connection to external active speakers or earphones
- Relay I/O interface for system linkage or access control



■ POE WALL MOUNT VIDEO INTERCOM TERMINAL

NVS-IP1000231C

- Built-in 3W speaker and microphone
- Compatible with SIP protocol
- Supports offline calling
- Standard RJ45 interface
- Line-output interface for connection to external active speakers or earphones
- Relay I/O interface for system linkage or access control





IP AMPLIFIER

■ IP BASED POWER AMPLIFIER

NVS-IP100006AM / NVS-IP100030AM

- Power Rating: 60W/130W/260W/360W/500W
- Support SIP integration
- Remote control & monitoring
- Supports offline broadcasting



■ 4 ZONE IP BASED MIXER AMPLIFIER

NVS-IP100013AM

- Power Rating: 130W/260W/360W/550W/700W
- 4.3-inch TFT LCD screen
- Supports infrared remote control
- Built-in mic and speaker for two-way intercom function
- Built-in clock chip for server-independent timed broadcasting



■ IP BASED PAGING MICROPHONE WITH BUILT-IN SERVER

NVS-IP100005PM

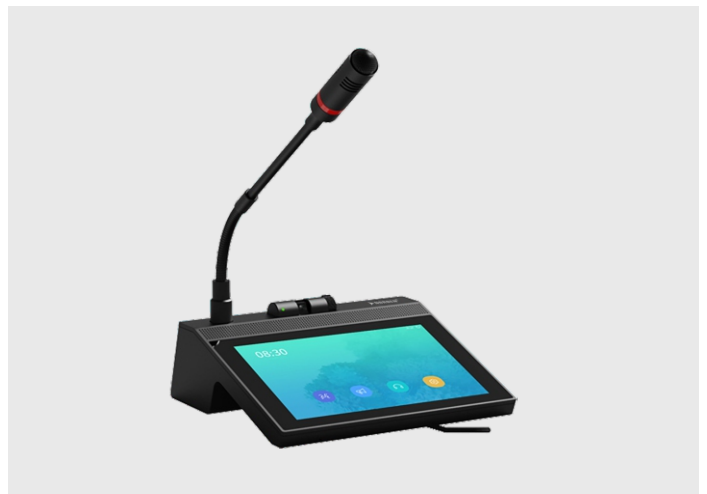
- Built-in webserver
- Built-in 3W speaker and unidirectional condenser microphone
- 4" High-definition capacitive touch screen
- Built-in audio processor
- Controllable via "Easy Mic" mobile app



■ IP BASED PAGING MICROPHONE

NVS-IP100003PM/NVS-IP100004PM

- NVS-IP100004PM consists of HD digital camera
- 7" high-definition display with 800x1280 resolution
- Built-in audio processor
- Supports initiating and receiving calls
- Supports file, pre-recorded and TTS broadcasting
- Supports online viewing of working status of other terminals



■ **IP BASED REMOTE PAGING MIC WITH VIDEO INTERCOM**

NVS-IP100026PM

- 10.2" TFT LCD touch screen and 13MP HD camera
- Built-in 3W speaker and unidirectional condenser microphone
- Built-in intelligent face recognition chip
- Supports pre-recording and file broadcasting function
- 1 Relay input and output interface



■ **IP PA CONTROL MANAGEMENT SERVER**

NVS-IP100042SW

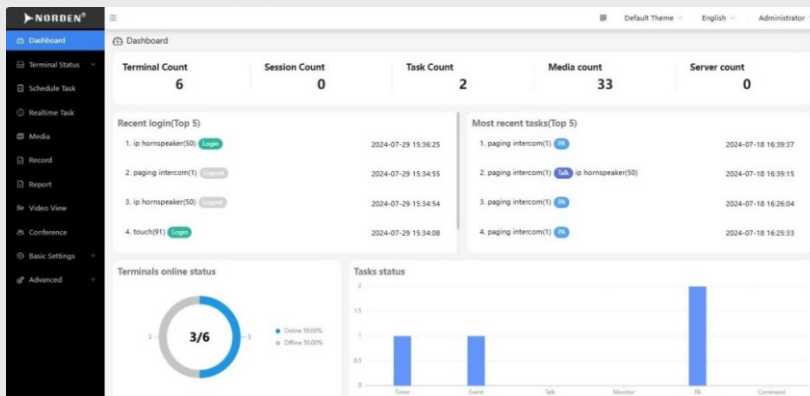
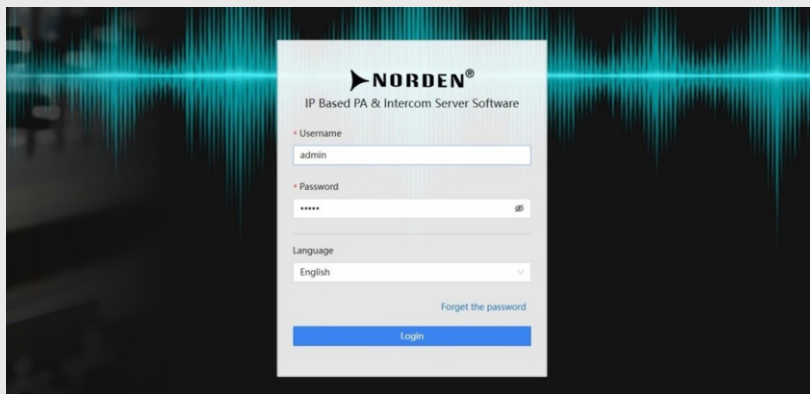
- 17.3-inch industrial grade reinforced touch screen
- High performance motherboard
- Large capacity, low power hard disk
- Emergency button and handheld microphone
- Service software for real time broadcast terminal monitoring



IP BASED PA & INTERCOM SERVER SOFTWARE

NVS-IP100001SW

- Map up to 1000 devices and infinity zones
- Schedule jobs like alarm, intercom, broadcast and timing program
- Unlimited zone creation and management
- Support SIP trunk integration with Asterisk, AVAYA, Cisco, 3CX etc
- Support Web GUI management interface







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