

LYINTL

NCS-206 Series

Full Digital Conference System



Installation and Operating Manual

2025-08-V4

1. IMPORTANT SAFETY INSTRUCTIONS



CAUTION: To reduce the risk of electric shock do not remove cover (or back panel). No user serviceable parts inside. Refer servicing to qualified personnel only.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user of the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance. Please carefully read the owner's manual.

INSTRUCTIONS:

All safety and operating instructions should be read before the product is operated.

Retain these instructions:

All safety and operating instructions should be retained for future reference.

This owner's manual should be considered as a part of the product, it must accompany it at all times, and it needs to be delivered to the new user when this product is sold. In this way the new owner will be aware of all the installation, operating and safety instructions.

Heed all warnings:

All warnings on the product and in owner's manual should be adhered to.
Heed all warnings.

Follow all instructions:

All operating and user's instructions must be followed.

Sentences preceded by  symbol contain important safety instruction. Please read it carefully.

DETAILED SAFETY INSTRUCTIONS.

Water and moisture:

This apparatus should not be used near water (i.e. bathtub, kitchen sink, swimming pools, etc.)

Ventilation:

This apparatus should be placed in a position that doesn't interfere with its correct ventilation. This unit, for example, should not be placed on a bed, sofa cover or similar surfaces that could cover ventilation openings, or placed in a built-in installation, such a bookcase or a cabinet that could block air flow through ventilation openings.

Heat:

This apparatus should be placed away from sources of heat, like radiators, heat registers, stoves or other products (including amplifiers) that produce heat.

Power sources:

- This apparatus should only be connected to a power source of type specified in this owner's manual or on the unit.
- If the supplied AC power cable plug is different from wall socket, please contact an electrician to change the AC power plug.

Grounding or Polarization:

- All precautions must be observed in order to avoid defeating grounding or polarization.
- Unit metal parts are grounded through the AC power cord.
- If the AC power outlet doesn't have grounding, consult an electrician for outlet grounding.

Power cable protection:

The power cable should be routed in such a way that it will not be walked on or pinched by items placed upon or against it, paying particular attention to cables at their connections, receptacles and wall outlet.

Cleaning:

- You can clean the exterior of the unit with compressed air or a damp cloth.
- Don't clean the unit using solvents like hydroelectricity, thinners, alcohol, or other volatile or flammable fluids.

Non-use periods:

The unit AC power cable should be unplugged from the outlet if it's unused for long periods.

Objects or liquid entry into the unit:

Be careful that no objects fall into the unit or that no liquid is spilled inside the unit through ventilation openings.

Safe power line use:

- Hold the plug and the wall outlet firmly while disconnecting the unit from AC power.
- When the unit will not be used for a long period of time, please unplug the power cord from AC power outlet.
- To avoid power cable damage, don't strain the AC power cable and don't bundle it.
- In order to avoid damage to the unit's power cable, be sure that the power cable is not walked on or pinched by heavy objects.

Unit relocation:

Before relocating the unit, please control the unit is turned off. The power cord must be unplugged from the wall outlet, and all the connecting cables should be disconnected as well.

Do not open this unit:

Do not attempt to open or repair this unit yourself. For any problem not described in this owner's manual, please refer to qualified personnel only or consult us or your National Distributor. Any improper operation could result in fire or electric shock.

Damages requiring services:

- Do not attempt to perform operations not described in this user's manual.
- In the following cases please refer to an authorized service centre or skilled personnel:
 - When the unit works improperly or it doesn't work at all.
 - If power cord or plug is damaged.
 - If liquid has spilled, or objects have fallen into the unit.
 - The unit has been exposed to rain.
 - The unit doesn't operate normally or exhibits a marked change in performance.
 - If the product has been dropped or has been damaged in any way.

Maintenance:

The user shouldn't attempt maintenance not described in this user's manual. All maintenance should be performed by qualified personnel only.

IMPORTANT SAFETY INSTRUCTIONS:

- Install this unit following owner's manual instructions.
- Do not install, connect or disconnect power supply when the unit is powered, otherwise there is a high risk of electric shock.
- Do not open the unit, there are no user serviceable parts inside.
- If you detect a particular smell from the unit, please immediately turn it off and disconnect the AC power cord.
- Don't block the unit's ventilation openings.
- Avoid using this unit in overload for a long period.
- Don't force commands (switches, controls, etc.)
- To obtain good speaker wire contact, please tighten the screw terminals firmly.
- **▲** For safety reasons, do not defeat the grounding connection. Grounding is for user safety.
- Use only connectors and accessories suggested by the manufacturer. .
- This unit should be fitted in an equipment rack (see INSTALLATION) and kept far from:
 - Wet places
 - Direct exposure to heat sources (like sun light)
 - Improperly ventilated places
- Disconnect the power cord during storms or when the unit is not in use.
- **▲** In order to prevent fire and reduce risk of electric shock, it is necessary to keep the unit far from dripping water. Please don't put cups, vases or other object containing liquids over the unit. In case of interference from source signal, THD value will raise over 10%. Don't place this unit in a bookshelf or in other enclosed spaces.
- LYINTL is not responsible for any damage that occurs due to a incorrect installation of the unit.

Remark:

- All rights reserved for translation, reprint or reproduction.
- Content may change without prior announcement
- All technical specifications are guideline data and not guaranteed featured

About this manual

This manual is a comprehensive guide to the installation and operation of LYINTL NCS-206 series fully digital conference system. It includes the detailed description of the functions and interfaces of the NCS-206 series system components, system connection and installation, system set up and operation.

The manual is divided into the following chapters:

Chapter 1: Introduction

An introduction to the system composition, technology, functions and features of NCS-206 series fully digital conference system.

Chapter 2: Conference main unit

Descriptions in detail of the functions and indications, installation and connection, configuration and operation of conference main unit and extension unit of NCS-206 series fully digital conference system.

Chapter 3: Conference unit

Descriptions in detail of the functions and indications, installation and connection, configuration and operation of conference units of NCS-206 series fully digital conference system.

Chapter 4: Conference connection

Descriptions in detail of the connection between system devices

Chapter 5: Environment and maintenance

In introduction to the work environment and maintenance of NCS-206 series fully digital conference system.

Chapter 6: Specification

In introduction to the work environment and maintenance of NCS-206 series fully digital conference system.

Chapter 1 Introduction

1.1 Summary

Based on digital control technologies, NCS-206 series Digital Conference System is flexible and reliable for any conference of mini/medium/large meeting. The system features include: microphone management, automatic video tracking, conference audio recording, voting, etc.

NCS-206 series fully Digital Conference System is also provided with function that to access and control main unit through software, thus the operator can easily manage and control the conference proceedings.

Other peripheral devices like computers, touch panels, projectors and loudspeakers can also be integrated with NCS-206 series Digital Conference System .

1.2 System Equipment

1. Conference Main Units:

The Conference Main Unit forms the core of the entire conference system. It provides power supply to all contribution unit and serves as key component to link system hardware to software control. In Stand-alone mode, the CMU only carries out basic management facilities; while more comprehensive management facilities can be implemented through the software control.

2. Extension Unit

4 group Ethernet interface for system microphone connecting

3. Conference Microphone Units

The microphone of the system, including chairman microphone and delegate microphone, is configured with various models according to different functional requirements.

4. Management Software

The management software of the system has complete functions, and is characterized by simple operation, safety, reliability and easy maintenance. The operator can centrally implement all-round control over the conference system, simplifying the operation and improving the efficiency.

The conference system software adopts modular design, including:

- (1) Basic setting module;
- (2) Advanced venue design module;
- (3) Microphone control module;
- (4) Voting management module;
- (5) Video control module;
- (6) Conference process management module;
- (7) After Conference module

5. Accessories

1.3 System Equipment

1.3.1 Conference Main Unit (CMU)

The Conference Main Unit forms the core of the entire conference system. It provides power supply to all contribution unit and serves as key component to link system hardware to software control. In Stand-alone mode, the CMU only carries out basic management facilities; while more comprehensive management facilities can be implemented through the software control.

By use digital audio transmission technologies, conference systems are linked tightly to the rapidly developing internet technology, communication technology and computer science. Users enjoy the convenience of the contemporary leading techniques.

The STP Cat5e or higher quality cable is used to transmit high quality digital audio, control and other information data, avoiding cables cluttering up the conference venues and adaptable to any system cabling requirements. The “hand-in-hand” design of contribution units enables the units to be added into the system at any desired point and simplifies equipment extension and maintenance significantly.

1.3.2 Conference Microphone Unit

All conference units of NCS-206 series are supplied by the main unit’s Ethernet interfaces is limited, it must be ensured during installation that the added-up values of the total power consumption of all conference units connected in each path and the power loss in extension cables do in no case exceed the maximum possible value delivered by each Ethernet interface. Otherwise the system will not work properly, or automatic protection will be triggered.

1.3.3 Accessories

Relevant accessories connected or used in NCS-206 series include: connection cables, gooseneck microphone, software, etc.

1.4 Conference Management Software

NCS-206 series conference system can be controlled by software that is comprehensive, reliable and eco-friendly. The user can access the software to manage centrally all aspects of the conference. The operation turns out to be easy and efficient.

By software control, function of NCS-206 series conference system include CMU setting, Speaking and Request list, Video Tracking, Edit Data of Participants, etc...

The system software is divided into two parts, web control and green software control. Web control can control the microphone on/off, working mode, and video tracking of the system through IP connection. Green software can achieve more functions through RS232/485 communication

1.5 Functions and Features

1.5.1 Set up numbers of active microphones and operation modes

a) Active microphone limit (1-9) .

b) Six operation modes can be set via the main unit

- ◇ “Free” mode: When this mode is selected, an unlimited number of participants can speak simultaneously.
- ◇ “Limit” mode: When this mode is selected, this display will show LIMIT MODE, plus the number of delegates that can speak simultaneously. Once this number of delegates is reached, no further delegates will be allowed to intervene until the number of active delegate microphones again falls below this limit
- ◇ “FIFO/Override” mode: When this mode is selected (First In-First Out), the LCD will display FIFO MODE, plus the number of delegates who can speak simultaneously. In this mode, the keeps track of the order in which the delegate microphones are activated. Once the preset limit of simultaneous delegates has been reached, and a new delegate presses the **MIC ON/OFF** key on his microphone, the FIRST microphone that was active when this limit was reached will be made inactive, and the new delegate microphone will be activated.
- ◇ “Apply” mode: When this mode is selected, only controlled by the software operator to decide the request microphone on/off
- ◇ PPT mode: Push to Talk
- ◇ VIP mode: The VIP microphones are not limited by the chairman microphone, the VIP microphone can on/off any time

1.5.2 Set up of chairman microphone

- a) Chairman microphone is unlimited by conference mode, only controlled by itself or software.
- b) Chairman Priority: When "Chairman Only" function is active, all delegate microphones will be off when priority key pressed (Delegate microphone IPS display will show "Chairman Only"), and the delegate microphones will not reactivate when their **MIC ON/OFF** key is pressed. These will remain excluded until the chairman again presses the **MIC ON/OFF** key to release this mode.

1.4.3 Software Control

- a) Active microphone limit and microphones mode selection.
- b) Microphone ID list, speaking and request list can be displayed on the software and through which the operation can turn on/off the microphones
- c) Set up microphone functions (such as speaking, sign in, ballot rights)
- d) Speaking time and warning time limit.
- e) Predefined position setting, video tracking (support Pelco-D and Visca), maximum 8 cameras can be controlled
- f) Edit conference data (such as conference heading, proposal, sub-screen display, delegates data, ballot information)
- g) System line detect to check microphone status.

1.4.4 Conference recording

- a) USB interface for conference recording
- b) The IPS display will show the recording information and USB flash disk remaining recording time

1.4.5 Video Camera Auto-tracking

- a) If CMU only support discuss, user can add video processor to support video camera auto-tracking function to support camera track the last active microphone and display video-Home image (the image when all microphones off) to sub-screens
- b) Support up to 8 cameras with video matrix

1.4.6 Conference Monitoring

Built-in 3.5mm phone jack for monitoring the conference.

1.4.7 Seamlessly integrated with central control system

The seamless integration of CMU(Via RS232C interface of NCS-206 series CMU) and central control system provides comprehensive conference system solution. Besides the basic conference management (discussion, video tracking, ballot, etc.), it also manages peripheral multimedia equipment, surrounding lights, projector display and sound equipment.

1.4.8 Excellent immunity to RF interference from mobile phones

Chapter 2 Conference Main Unit

2.1 Conference Main Units

The Conference Main Unit forms the core of the entire conference system. It provides power supply to all contribution unit and serves as key component to link system hardware to software control. The CMU adopt DSP techniques such as feedback suppression, noise cancellation, automatic gain, and digital equalization. It's flexible and reliable for any conference of mini/medium/large meeting.

Product Include:

NCS-206M

Digital Conference System Main Unit : Discuss, recording, monitoring, 4.3 inch IPS touch display, Ethernet interface

NCS-206S

Digital Conference System Main Unit: Discuss, recording, monitoring, video tracking (RCA), voting, 4.3 inch IPS touch display, Ethernet interface

NCS-206HD

Digital Conference System Main Unit: Discuss, recording, monitoring, video tracking (HDMI), voting, 4.3 inch IPS touch display, Ethernet interface

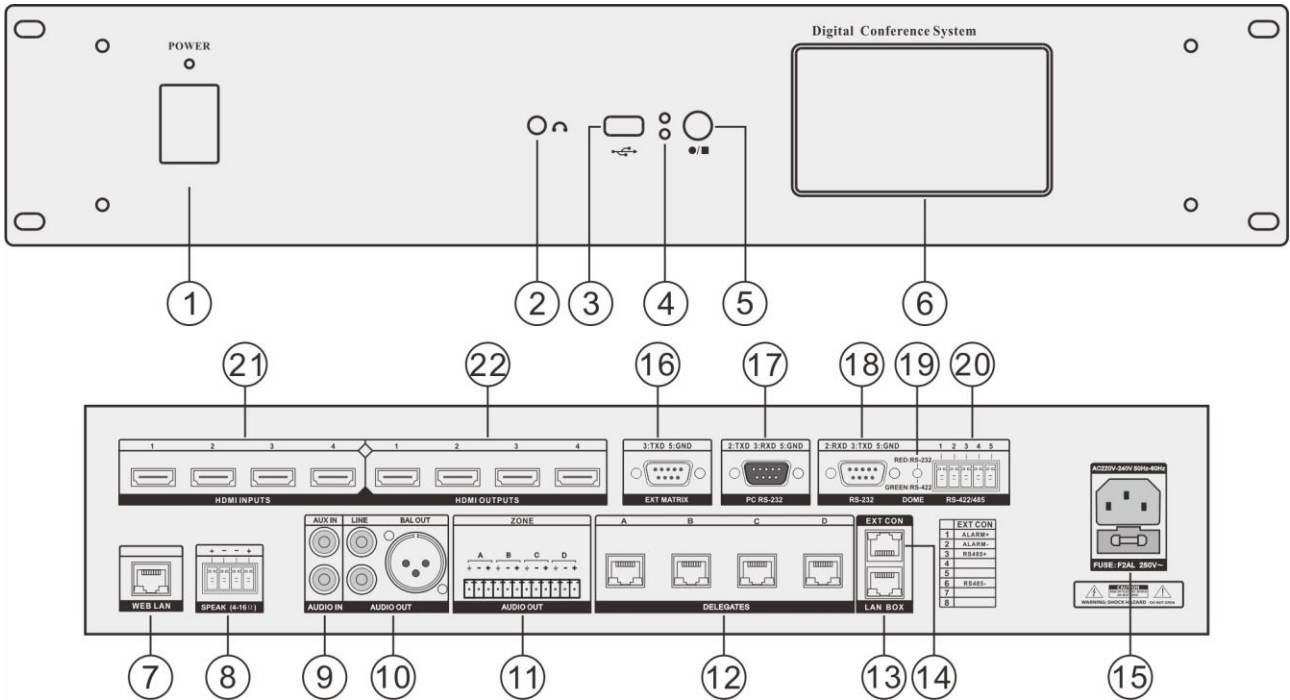
NCS-206E

Digital Conference System extension unit for long distance connection and power extension.

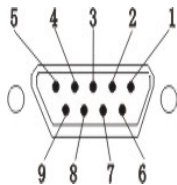
2.1.1 Main Features and Specifications of CMU

- a) STP Cat5e or higher quality cables are introduced for data transmission and power supply, supporting data transmission with a fast internet service. Thus, audio signals could be delivered perfectly in a long distance.
- b) In order to ensure a clear, highly sensitive, and perfect sound quality, CMU built-in high-performance dual-core CPU, 32 bit high-speed DSP technologies, feedback suppression, noise cancellation, automatic gain, and digital equalization are all available.
- c) Built-in video tracking control and ballot processor, high definition switching matrix are available for auto video tracking with video matrix (NCS-206S/NCS-206HD).
- d) The CMU owns a built-in USB, allowing the realizing of recording and monitoring.
- e) Audio could be outputted in balanced or unbalanced way.
- f) Different kinds of interfaces, like, Ethernet, RS422 and RS232, could meet requirements towards different devices (NCS-206S/NCS-600HD).
- g) Six modes are available, including FREE, REQUEST(1-9),LIMIT (1-9), and FIFO (1-9), APPLY and VIP
- h) Multiple conference functions could be realized when CMU is connected to computer.
- i) Power Input: 230VAC 50/60Hz
- j) Maximum Output Power: 350W
- k) Frequency Response: 100Hz-15KHz
- l) S/N: > 96dB
- m) T.H.D: 0.1%@1kHz
- n) Dimensions: 485x 88 x 360 mm, 2 U rack 19"

2.1.2 Functions and Instructions of CMU



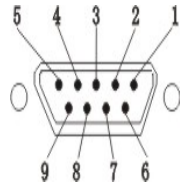
- 1) Power Switch: Use this button to switch on or to switch off the main unit
- 2) Monitoring earphone interface (Φ3.5 mm)
- 3) UBS interface: Be connected to USB drive for MP3 recording
- 4) Indicator LED to show recording status: (Green LED => power supply ok, Red LED : full red => Pause Red LED : flashing slowly after a short push on button => recording, Red LED : flashing quickly after long push on button during recording => save recording)
- 5) Recording function button
- 6) Display: 4.3 inch IPS touch control display for basic system setting and recording control
- 7) WEBLAN: connect to PC support Web software control via IP
- 8) Speaker: User can connect external speaker to this port directly, 2X50W RMS 4-16 Ohm
- 9) Audio IN: Line level input (RCA). Connect this input to an audio source .
- 10) Audio Out: Balanced signal output (male XLR3) and Unbalanced line level output (RCA) Connect mixer or amplifier to this output
- 11) Zone Audio out: Independent output of audio corresponding to each microphone outlets (A/B/C/D)
- 12) 4 path microphones output interface (Ethernet) to connect system microphones (A/B/C/D)
- 13) Extension unit connection interface: use this interface connect to extension unit
- 14) Multifunctional digital control interface: RS485: PIN 3=RS485A, PIN 6=RS485B; RS232: PIN 1 =GND, PIN 2=TXD; ALARM (5V-24V): PIN 7=GND, PIN 8=Positive
- 15) AC POWER SOCKET: Power 230VAC 50/60Hz
- 16) Matrix control interface: PIN 3=TXD, PIN 5=GND
- 17) RS232 PC control interface: PIN 2=TXD, PIN 3= RXD, PIN 5=GND



RS-232 (PC) female

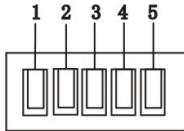
- | | |
|--------|-------|
| 1- NC | 6- NC |
| 2- TXD | 7- NC |
| 3- RXD | 8- NC |
| 4- NC | 9- NC |
| 5- GND | |

18) RS-232 camera control interface



- RS-232 Male (Red LED)
- 1.NC 6.NC
 - 2.RXD 7.NC
 - 3.TXD 8.NC
 - 4.NC 9.NC
 - 5.GND

- 19) Camera data control indicator
- 20) RS422/485 camera control interface

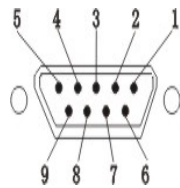


- RS-422 (Green LED)
- 1- TXD + (RS485A)
 - 2- TXD - (RS485B)
 - 3- RXD +
 - 4- RXD -
 - 5- GND

- 21) Camera video input interface (HDMI/RCA x 4)
- 22) Camera video output interface (HDMI x 4 /RCA x2)

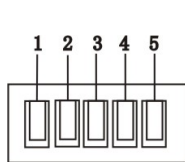
2.1.3 Description of Control Interface of CMU

① RS232 PC control

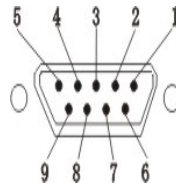


- RS-232 (PC) female
- 6- NC 10- NC
 - 7- TXD 11- NC
 - 8- RXD 12- NC
 - 9- NC 13- NC
 - 10- GND

② Camera control connector RS232 and RS-422
 Note : To know connections, read the user manual of the dome.



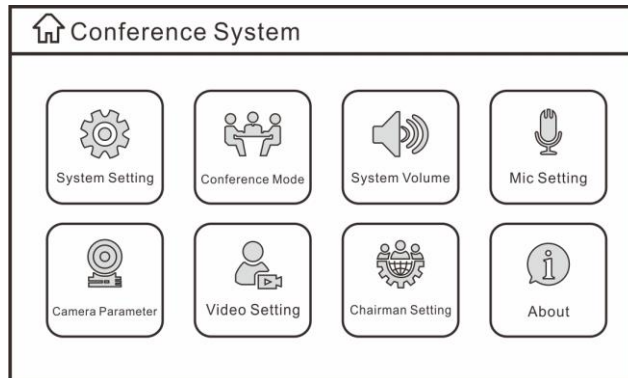
- RS-422**
- 1- TXD + (RS485 +)
 - 2- TXD - (RS485 -)
 - 3- RXD +
 - 4- RXD -
 - 5- GND



- RS-232 Male**
- 1.NC 6.NC
 - 2.RXD 7.NC
 - 3.TXD 8.NC
 - 4.NC 9.NC
 - 5.GND

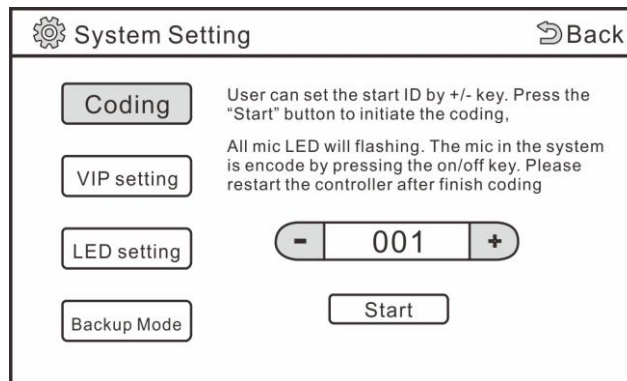
2.1.4 Instruction of IPS Touch Display of CMU

The display will light after turn on the main unit with power switch and enter main interface as below:



a) System Setting

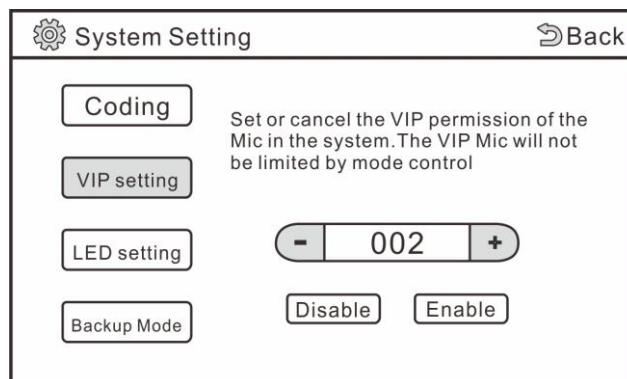
➤ **Coding:**



Each mic has a number ID which is affected (very important to setup the discuss, auto-track and voting function), user can set the microphone id after setup the system.

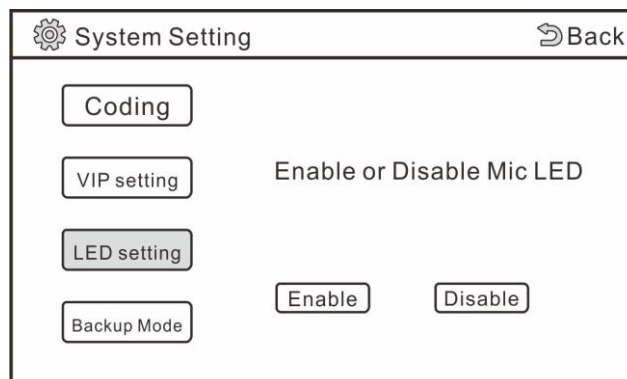
- ✧ This coding information is displayed on all the microphone LCD, press the on/off button of the corresponding mic to the affected the number.
- ✧ The other mics are always show the coding information but with an incremented number of a unit.
- ✧ Please make sure the microphone id number should be different in one system
- ✧ Please make sure system has microphone id number 1 when you use software.

➤ **VIP Setting:**



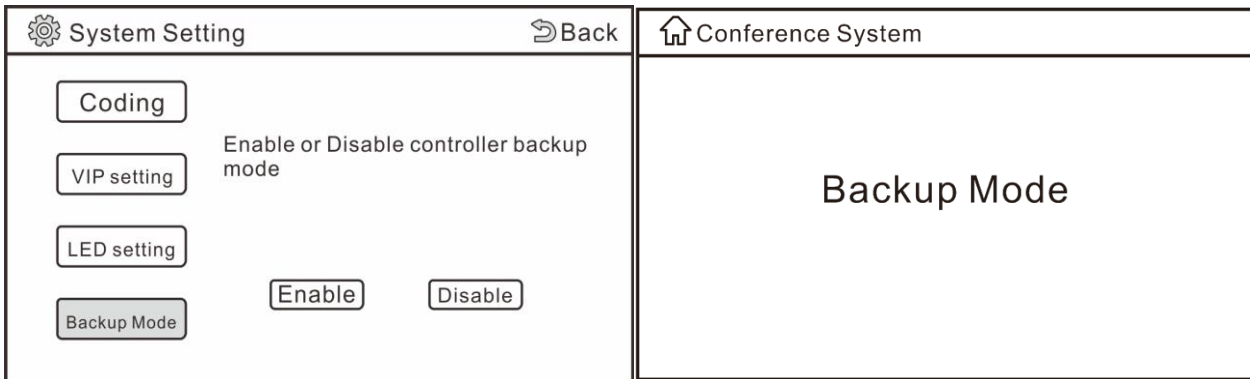
VIP microphone will not be limited by the system mode control

➤ **LED Setting:**



Enable or disable the system gooseneck microphone LED

➤ **Backup Mode:**

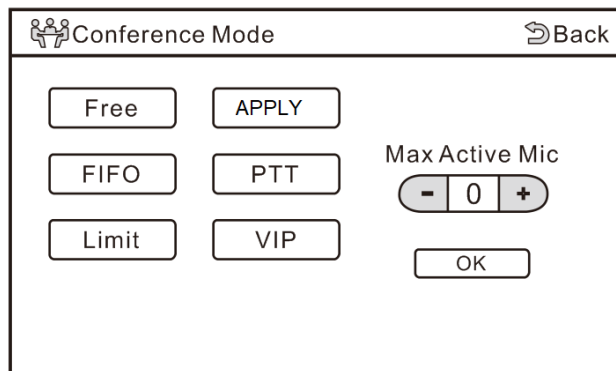


Dual hot backup function, which can set the current CMU as the backup host.

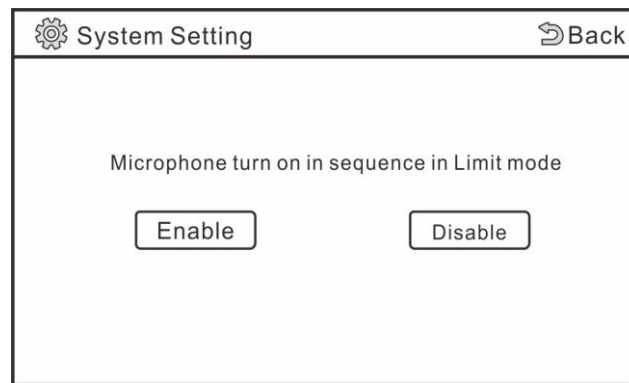
After enabling backup mode, the backup host display screen shows that the system has entered backup mode. After the CMU enters backup mode, clicking anywhere on the touch interface, it will return to the settings interface, and click the disable button to exit backup mode.

In backup mode, any venue mode set by the CMU is automatically synchronized to the backup host. When the CMU malfunctions, the backup host will automatically and seamlessly take over the microphone unit.

b) **Conference Mode**

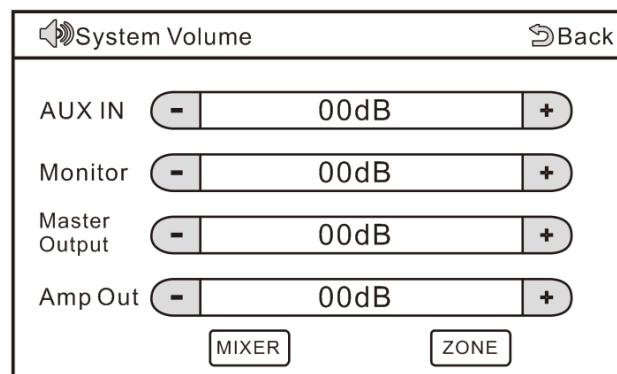


- “Free” mode : When this mode is selected, an unlimited number of participants can speak simultaneously.
- “Limit” mode (1-9): When this mode is selected, plus the max active mic number of delegates that can speak simultaneously. Once this number of delegates is reached, no further delegates will be allowed to intervene until the number of active delegate microphones again falls below this limit
- ✧ After select limit mode, click on "Conference Mode" in the upper left corner of the microphone management interface to enter the secondary settings : Enable or disable turn on the microphone in sequence. Once the number of active microphone is reached the limit, subsequent pressed microphones will not be able to be turned on. The microphone light led flashing indicates waiting to be turned on. When the previously enabled microphone is turned off, the microphone waiting to be turned on will automatically turn on



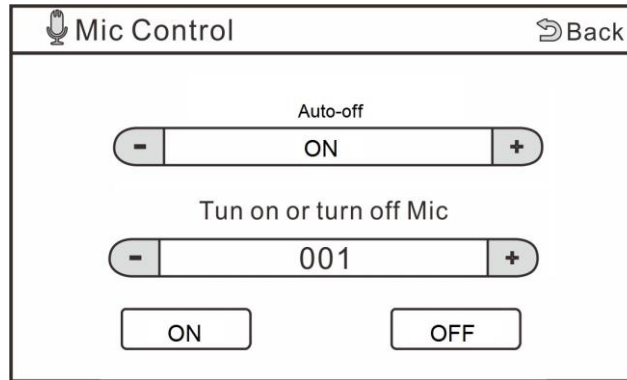
- “FIFO” mode (1-9): When this mode is selected(First In-First Out), plus the max active mic number of delegates who can speak simultaneously. In this mode, the keeps track of the order in which the delegate microphones are activated. Once the preset limit of simultaneous delegates has been reached, and a new delegate presses the **MIC ON/OFF** key on his microphone, the FIRST microphone that was active when this limit was reached will be made inactive, and the new delegate microphone will be activated.
- “Apply” mode: When this mode is selected, only controlled by the software operator to decide the request microphone on/off, there is no limitation of the request microphone number, but only 9 delegate microphone can be on maximum at the same time. The request microphone LED will flash when he pressed the on/off button
- PTT: When the delegate presses and holds the microphone on/ff button, the microphone will be activated; when the on/off button is released, the microphone will be deactivated
- VIP microphone is unlimited by conference mode, only controlled by itself or software, you can enable or disable the VIP function of the delegate microphone
- Active microphone number: To set active microphone number in the system

c) System Volume



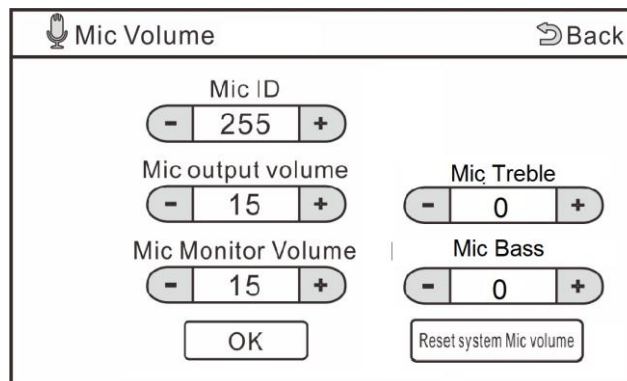
- AUX IN: Adjust the system audio input volume (adjustment range: -84dB-00dB)
- Adjust the volume of the monitoring earphones (adjustment range: -84dB-00dB)
- Master output: Adjust the system audio output volume (adjustment range: -84dB-00dB)
- Amp out: Adjust the speaker audio output level (adjustment range: -84dB-00dB)
- MIXER: Select balanced signal output (male XLR3) and unbalanced line level output (RCA)
- ZONE: Select Independent output of audio corresponding to each microphone outlets (A/B/C/D)

d) Mic Setting



- (1) Select the ID number of the corresponding microphone to turn it on or off.
- (2) Auto-off: Enable or disable system microphone auto-off function, when the sound pressure in the venue remains below 40dB for 45 consecutive seconds, the microphone will automatically turn off

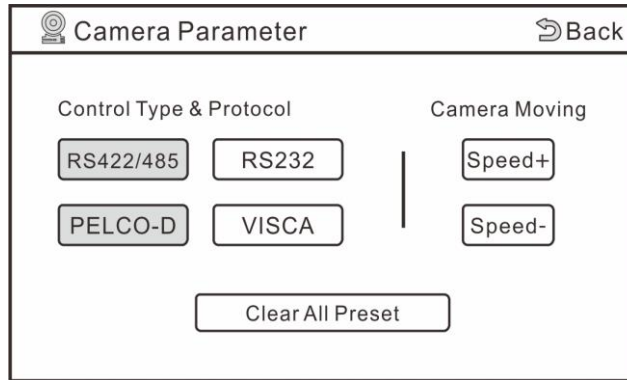
✧ Click on "Mic Control" in the upper left corner of the microphone management interface to enter the secondary settings : Mic Volume Setting



The microphone volume and speaker volume of all microphones in the system can be adjusted uniformly or independently.

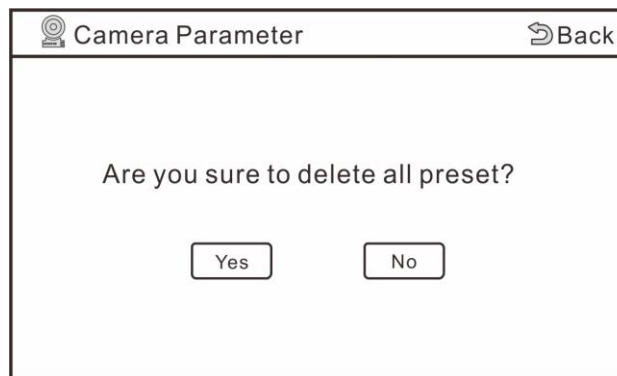
- When the unit ID is set to 255, the volume of all microphones is adjusted uniformly. When the unit ID is set to less than 250, the volume level of the ID microphone is set independently.
- The microphone output volume can be independently adjusted. (Level 0-15)
- The microphone monitor speaker volume can be independently adjusted. (0-15 levels), the microphone unit requires a built-in speaker model to be set up.
- The treble of the microphone can be independently adjusted. (0-15 levels), the microphone unit needs to have treble adjustable functions to be set.
- The treble/bass of the microphone can be independently adjusted. (0-15 levels), the microphone unit needs to have treble/bass adjustable functions to be set.
- Factory settings, restore all microphone default values in the system: microphone volume 15, microphone speaker volume 15.

e) Camera Parameter

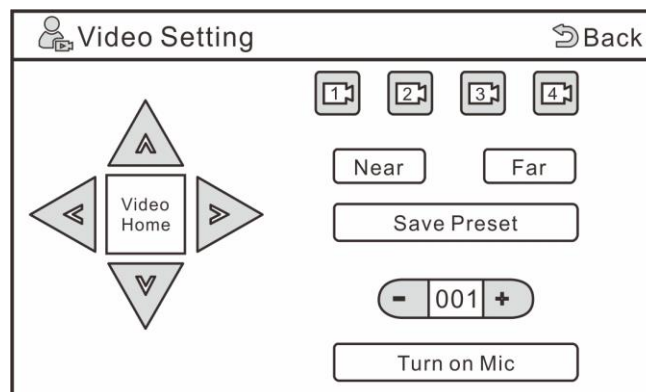


Select the camera control type and protocol, and adjust the moving speed of the camera I

- ✧ Operator can clear all preset position of the camera, please pay attention to using this function. After clearing all preset positions, you must reset the preset positions of all microphone units in order to achieve video tracking function



f) Video Setting



Operator can set microphone preset points. Press the 'Back' button to confirm and return to the menu page.

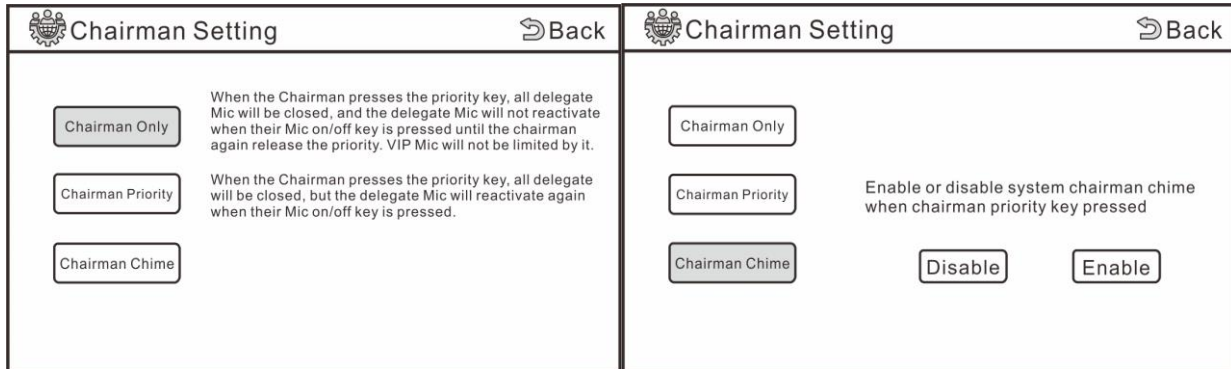
Steps for setting up video tracking

Firstly, please select the correct camera control type and protocol, the CMU supports control interfaces RS232,RS422, and RS485; Control protocols: VISCA, PELCO-D, Baud: 9600. (Note: After selecting the control type, it takes 3-5 seconds to select the control protocol again)

Select "1" on mic id selection interface and click the "Turn on Mic" button. At this time, the Microphone ID code 001 will automatically on (you can also manually tun on the microphone you want to set); At the "Camera 1-4" section, select the camera you want to capture the images of this microphone; Use buttons such as up, down, left, right, near, far, to get the best image of this microphone, click the "Save Preset Points" button.

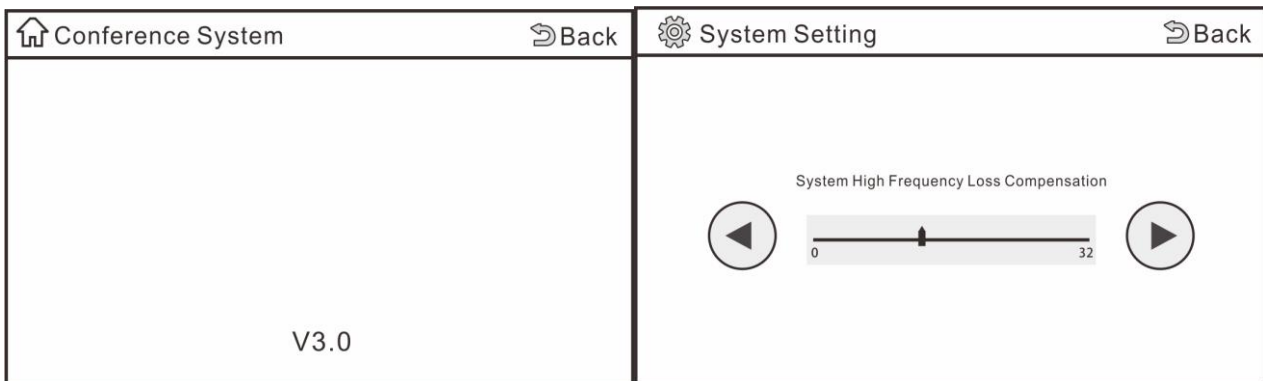
Repeat the second operation step and set the preset positions for all microphone units in sequence. With all microphones turned off, select "Camera 1" and use buttons such as up, down, left, right, pull in, etc. to control the camera. Adjust the camera to a position where the entire venue or most of the venue can be captured, Click on the "Vide Home" button (Video Home means that when all microphone units are turned off, the No.1 camera will automatically move to an angle to capture the entire scene).

g) Chairman Setting



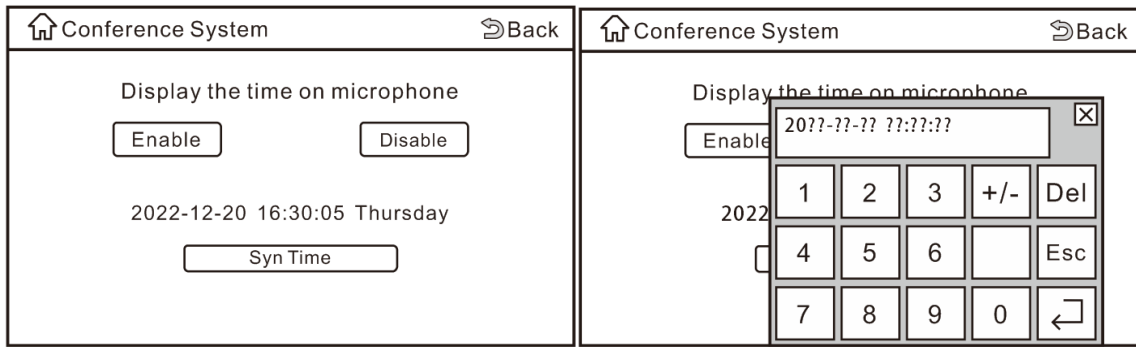
- Chairman only: when “Chairman Only” function is active, all delegate microphones will be off or mute when priority key pressed (Delegate microphone IPS display will show “Chairman Only”), and the delegate microphones will not reactivate when their **MIC ON/OFF** key is pressed. These will remain excluded until the chairman again presses the **MIC ON/OFF** key to release this mode.
- Chairman priority: .When the chairman presses the **PRIORITY** key , all delegate microphone will be excluded, but the delegate microphones will be reactivated normally when their **MIC ON/OFF** keys are pushed.
- When the chairman presses the **PRIORITY** button, the delegate speaker monitors will reproduce a warning tone.

h) About



Check the current system version, click on the version number to enter the line high-frequency loss compensation function interface, which can adjust the line high-frequency loss compensation (0-32)

If microphone with LCD display, the microphone can display current real time, you can hold and press “Conference System” icon on the left top of the version interface, the CMU display will switch to time setting . If you want update the date and time of the system, please hold and press current displayed time, LCD display will switch to next setting, after finish setting the data and time you required, press “Syn Time”, CMU will send the setting time to all microphones

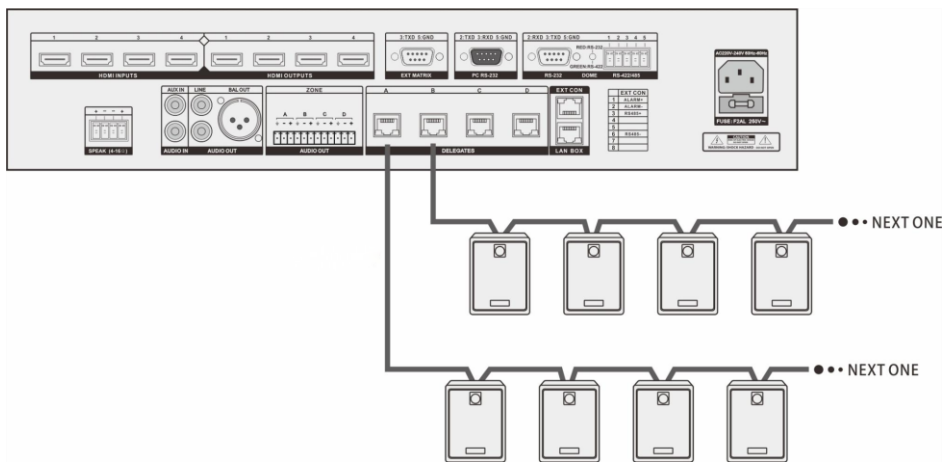


2.1.5 Installation and connection of CMU

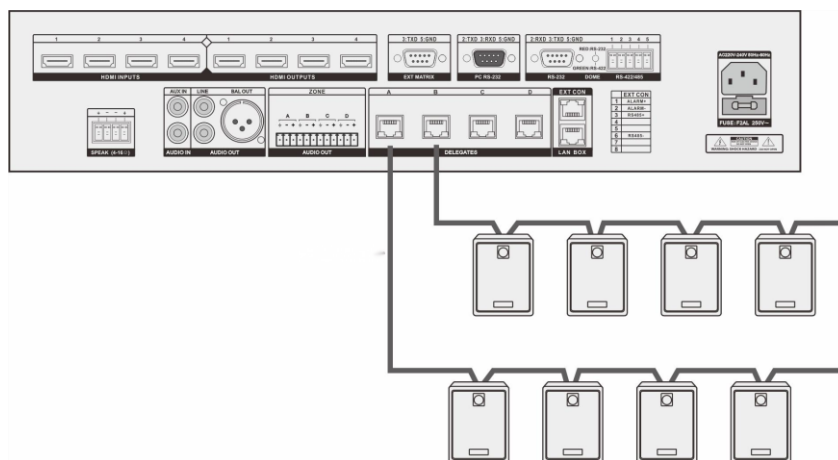
NCS-206 series conference main unit is stylish and cabinet design that can be install on table or standard cabinet.

NCS-206 series CMU has 4 outlet (Ethernet interface) cable connectors for microphones. When connecting the main unit to the microphone units, just connect the RJ45 connector of the first unit to the output of the main unit. For longer distance between the microphone unit and CMU/extension unit, a STP cat5e cable (both end of this cable equipped with RJ45 connector) is used. Just connect the RJ45 connector of the cable to the microphone unit and connect the other side to the output of the main unit.

- Connection microphone daisy-chained



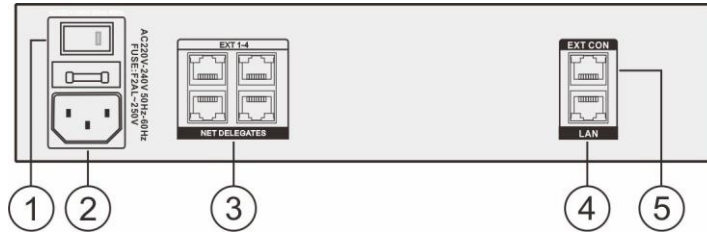
- Connection microphone closed-loop lines



❖ You can not use zone audio output if system microphone connected in closed-loop lines

2.2 Digital Conference System Extension Unit

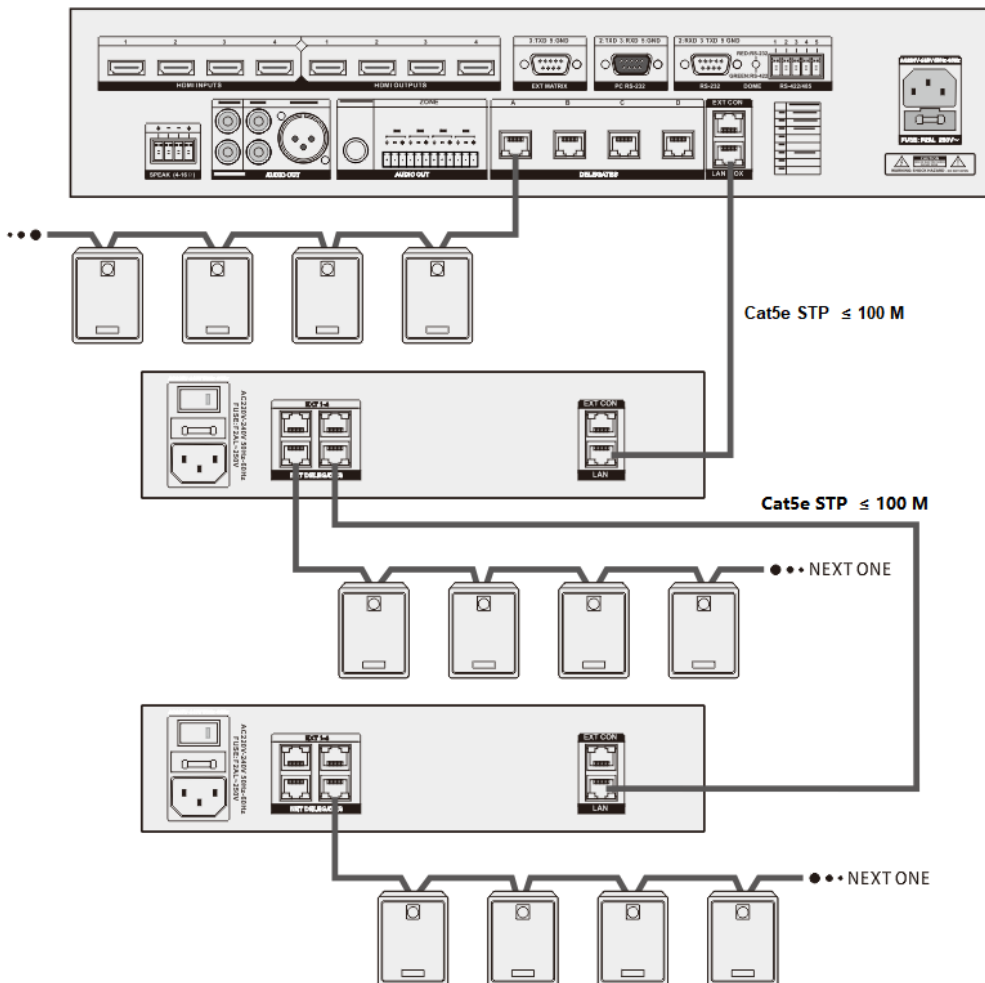
2.2.1 Functions and Instructions



- ① POWER: Main power on/off switch
- ② AC POWER SOCKET: Power 230VAC 50Hz
- ③ System outlet (Ethernet interface) to connect microphones
- ④ Extension unit connection interface: use this interface connect to CMU or next extension unit
- ⑤ Multifunctional digital control interface

2.2.2 Connection to the CMU

The CMU is connected to the extension unit using a Cat5e (or above) Ethernet cable (up to 100 meters in length). The connection interface of the CMU and extension unit is the (LAN) interface. Multiple interactive extension unit can be extended and connected, the cable between the processors are Cat5e STP cable.



Due to the voltage drop in the extension cable caused by the ohmic resistance, the number of microphone units available for each outlet connector will be reduced according to the length of the cable connected. The relationship is described as below.

The extension cable connected between the main unit and the first microphone unit carries the current of all subsequent units and influences at the same time the maximum possible load of the CMU/Extension unit.

| The cable length between the CMU/Extension unit and the first microphone | Max microphone quantity of each Ethernet outlets | | | |
|--|--|---------------------------------|---|---|
| | Microphone without display & Monitor Speaker | Microphone with Monitor speaker | Microphone with Display and without Monitor Speaker | Microphone with Display and Monitor Speaker |
| 15 Meters | 25 | 14 | 10 | 5 |
| 20 Meters | 20 | 12 | 8 | 4 |
| 30 Meters | 16 | 9 | 4 | Add Extension Unit |
| 50 Meters | 11 | 4 | Add Extension Unit | Add Extension Unit |
| 100 Meters | 7 | Add Extension Unit | Add Extension Unit | Add Extension Unit |

Chapter 3 Conference Microphone Units

3.1 Conference Microphone Units

The conference microphone units is the common name to describe the unit used by the attendees to contribute to a conference. The term includes chairman unit and delegate unit.

Product Type:

NCS-2062c

Digital Conference System Chairman Unit (4.1 inch IPS HD touch screen, Ethernet interface)

NCS-2062d

Fully Digital Conference System Delegate Unit. (4.1 inch IPS HD touch screen, Ethernet interface)

NCS-2062Tc

Digital Conference System Chairman Unit (4.1 inch IPS HD touch screen, Ethernet interface)

NCS-2062Td

Digital Conference System Delegate Unit. (4.1 inch IPS HD touch screen, Ethernet interface)

NCS-2060c

Digital Conference System Chairman Unit (Ethernet interface)

NCS-2060d

Digital Conference System Delegate Unit. (Ethernet interface)

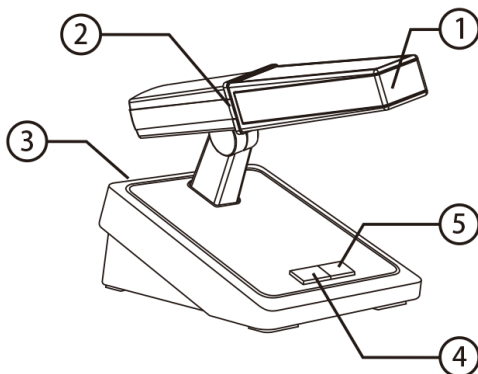
NCS-2061c

Digital Conference System Chairman Unit (Ethernet interface)

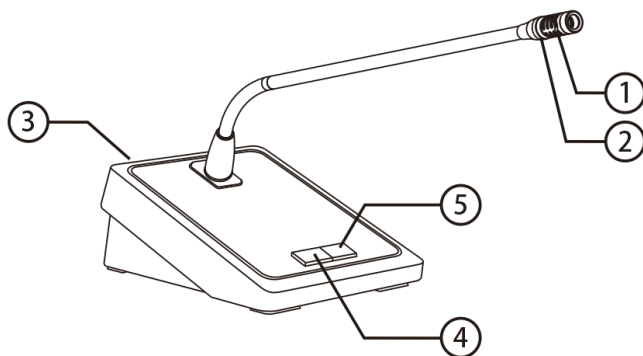
NCS-2061d

Digital Conference System Delegate Unit. (Ethernet interface)

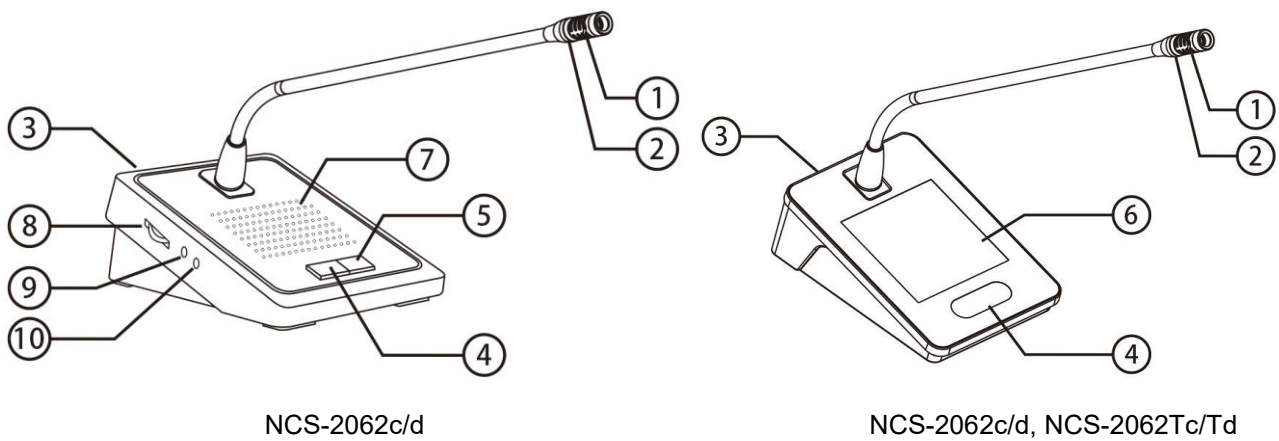
3.2 Functions and instructions



NCS-2060c/d



NCS-2061c/d



NCS-2062c/d

NCS-2062c/d, NCS-2062Tc/Td

- ① Electret condenser cardioid microphone
- ② Indicator light on active microphone: When microphone is active, indicator light switches on
- ③ Ethernet interface: both Ethernet interface has same function, user can connect RJ45 connector to any Ethernet interface if necessary
- ④ Delegate microphone: Press this key to activate/deactivate the microphone or request/cancel request to speak. (NCS-2062c and NCS-2062Tc chairman microphone hold and press this key 1 secs to activate the chairman priority function)
- ⑤ Priority key (for chairman unit only). According to the priority mode configuration on the main unit. When press and hold this key 1 second on chairman
 - ✧ If configured as “Mic Mute”, all active delegate microphones will be muted when this key pressed and they will resume when pressed the on/off key to release this mode.
 - ✧ If configured as “Mic Off”, all active delegate microphones will be switched off when this key pressed and they will resume when pressed the on/off key to release this mode.
 - ✧ Under “Request” mode, pressing this key will clear the request list
 - ✧ If chairman microphone is not active, pressing this key will activate it.
- ⑥ Touch Display: To display the microphone status and other information
- ⑦ Microphone speaker monitor
- ⑧ Microphone monitor speaker/earphone volume control
- ⑨ Earphone jack 3.5mm
- ⑩ REC output jack. 3.5mm jack, lavalier MIC jack of chairman unit

3.3 Connection

3.3.1 Connection to the CMU

The microphone unit is equipped with a 2 meter long cat5e cable with a standard RJ45 connector. To connect to CMU, just connect the RJ45 connector of the first unit to the output of the NCS-206 series main unit.

In case of a long distance between the conference unit and the CMU, use Cat5e extension cable. Just connect the RJ45 connector of the cable to the microphone unit and connect the other side to the output of the main unit.

- When system under coding, please coding the conference microphones one by one and do not press the "Mic On/Off" key of several conference microphones at the same time.

3.4.2 Delegate Microphone

Speaking: Speaking mode is configured on the CMU

- "Free" mode : When this mode is selected, an unlimited number of participants can speak simultaneously.
- "Limit" mode (1-9): When this mode is selected, plus the max active mic number of delegates that can speak simultaneously. Once this number of delegates is reached, no further delegates will be allowed to intervene until the number of active delegate microphones again falls below this limit
- "FIFO" mode (1-9): When this mode is selected(First In-First Out), plus the max active mic number of delegates who can speak simultaneously. In this mode, the keeps track of the order in which the delegate microphones are activated. Once the preset limit of simultaneous delegates has been reached, and a new delegate presses the **MIC ON/OFF** key on his microphone, the FIRST microphone that was active when this limit was reached will be made inactive, and the new delegate microphone will be activated.
- "Apply" mode: When this mode is selected, only controlled by the software operator to decide the request microphone on/off, there is no limitation of the request microphone number, but only 9 delegate microphone can be on maximum at the same time. The request microphone LED will flash when he pressed the on/off button
- PTT: When the delegate presses and holds the microphone on/ff button, the microphone will be activated; when the on/off button is released, the microphone will be deactivated
- VIP microphone is unlimited by conference mode,only controlled by itself or software, you can enable or disable the VIP function of the delegate microphone

3.4.3 Chairman Microphone

The chairman microphone features all the functions of a delegate microphone, and the following additional functions

1. Priority

- Chairman only: when "Chairman Only" function is active, all delegate microphones will be off or mute when priority key pressed (Delegate microphone IPS display will show "Chairman Only"), and the delegate microphones will not reactivate when their **MIC ON/OFF** key is pressed. These will remain excluded until the chairman again presses the **MIC ON/OFF** key to release this mode.
- Chairman priority: .When the chairman presses the **PRIORITY** key , all delegate microphone will be excluded, but the delegate microphones will be reactivated normally when their **MIC ON/OFF** keys are pushed.

2. Speaking

The chairman microphone is unlimited by the system mode, it can turn on/off its microphone at any time.

Chapter 4 System Connection

4.1 Summary

NCS-206 series Digital Conference System has a simple but efficient structure. Its installation is simple, quick and does not need special training. Daisy-chain connection is adopted between conference unit as well as to CMU via Ethernet cable.

In this chapter, the connections of NCS-206 series Digital Conference System are introduced by diagrams.

4.1.1 Connection principles

The Conference Main Unit forms the core of the entire conference system. It provides power supply to all microphone units and serves as key component to link system hardware to software control.

Since microphone units are powered by the CMU, thus, the total number of microphone units in any installation is limited by the maximum power handling capacity and control capacity of the NCS-206 series CMU. In one system, up to 250 units can be connected by adding NCS-206E extension unit.

The CMU can work alone to achieve basic control functions, when through software control, more powerful and versatile management and control functions are accessible.

4.1.2 Connection cables

All microphone units equipped with a 2 m cat5e cable, when the microphones are connected one by one, connect first unit to the outlet socket (Ethernet interface) of the CMU, and then connect this microphone to the next one via any Ethernet interface on the microphone- thus microphone units are daisy-chain connected. Cat5e cable can be used between microphone units and the CMU.

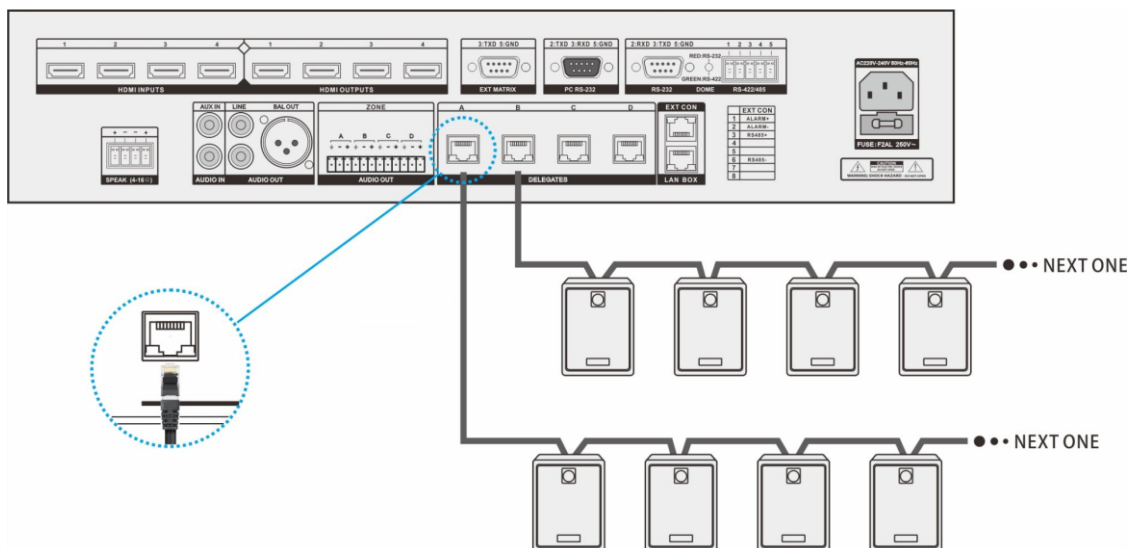
4.1.3 Extension cable

If the distance between the CMU and the microphone unit or one microphone unit to another one exceeds 2 meter, an extension cable is needed. Due to the voltage drop in the extension cable caused by the ohmic resistance, the number of microphone units available for each outlet connector will be reduced according to the length of the cable connected.

4.2 Connection between the CMU and the microphone units

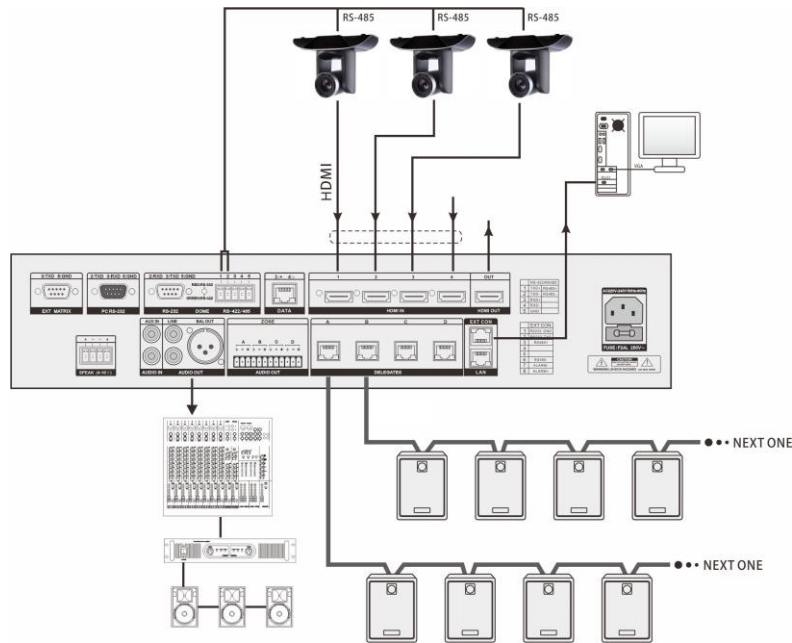
All microphone units of NCS-206 series system adopt Cat5e Ethernet cable and are daisy-chained, which makes the installation handy and effortless.

Connect the first microphone to the outlet port of the CMU (both of them are Ethernet interface) via Cat5e Ethernet cable with RJ45 connector, and then connect the first microphone to the second one with the same type cable with RJ45 connector. Proceed one by one in a series configuration. The Cat5e Ethernet extension cables can be used between microphone units and the CMU.



4.3 Connection between the CMU and automatic video tracking system

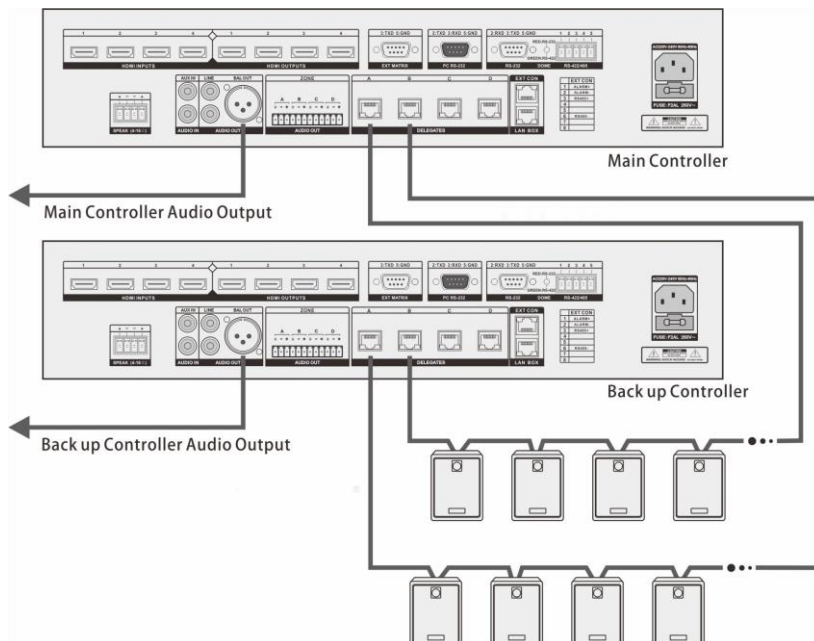
NCS-206 Series Digital Conference System can be connected to an automatic video tracking system. For video tracking purposes, the software control or the touch display on CMU panel can set camera presets for every conference microphone. If the conference microphone is switched on, video tracking system will automatically find the appropriate preset and focus on the speaker. The view of the speaker will be display on large screen or other display devices. The automatic video tracking system is compatible with several kinds of video signals and operates automatic video switching.



4.4 Connection of hot-backup dual server

Dual backup controller connection, the main controller and the standby unit are connected by hand-in-hand, and the last microphone unit is connected to the NET interface of the backup controller through a network cable. The main controller, microphone unit, and backup controller are connected by hand-in-hand.

Note: The dual hot backup function is for the main controller or backup controller to manage the power supply to the microphone units independently, so this connection cannot increase the quantity of microphones in the system. The audio output of the main controller and backup controller needs to be pre-connected to the subsequent sound reinforcement equipment and adjusted to the best effect



Chapter 5 Working environment and maintenance

Suitable working environment and proper maintenance methods can effectively extend service life of the equipment. For maintenance please read the contents of this section carefully.

5.1 Public areas

In public areas ensure that the cables attached to the system units, including extension cables, are run and laid out in a neat and tidy manner where they do not interfere and hinder public walk ways.

It's recommended that the chairman unit and the interpreter units are connected at the beginning of the output line and not at the end. In public areas where connectors and cables could be trampled on, it is strongly suggested to use protective covers according to the existing protection specifications.

Due to the directivity of the microphone used in the discussion units, every speaker should face the microphone at a convenient distance when speaking, to achieve both best audibility and intelligibility.

5.2 Technical rooms

It is recommended to meet the following conditions for technical rooms where NCS-206M control equipment is housed:

- ✧ Ensure that the area is a dust-free environment
- ✧ Ensure adequate ventilation
- ✧ Ensure adequate lighting. But be sure that the lighting does not impede the operator in the control room and normal system operation
- ✧ Do not place objects on the top of units. They could fall into vents or could cover them and thus prevent proper cooling of electronic components inside the units. By falling into a unit, objects could cause trouble such as fire and electric shock
- ✧ To avoid the risk of shock or permanent damage to the system unit, do not expose units to rain or moisture.
- ✧ Do not attempt to remove the top cover of the system main units as you will be exposed to a shock hazard. The covers should only be removed by qualified service personnel. If any repair or Maintenance is required, contact the LYINTL service center in your region.
- ✧ Equipment is only for indoor use. Do not expose it to sunlight.

Warning: Damage to the power cable may cause fire or a shock hazard!

5.3 Ventilation

Maintain good ventilation: ventilation holes are provided on lateral of the main unit. This unit should be placed in a position that doesn't interfere with its correct ventilation. This unit, for example, should not be placed on a bed, sofa cover or similar surfaces that could cover ventilation openings, or placed in a built-in installation, such a bookcase or a cabinet that could block air flow through ventilation openings.

5.4 Cleaning

Do not use alcohol , ammonia or petroleum based liquids or abrasive cleaners to clean the equipment. Unplug first and clean with a soft cloth slightly dampened with mild soap and water solution. Assure yourself that the relevant unit is dry before operating it.

5.5 Storage

If the units are not to be used for a long period of time, disconnect the mains supply from all mains supplied units. Store them in a dust-free dry area with adequate ventilation.

Chapter 6 Technical specifications

6.1 System specifications

System performance

Conforms to IEC 60914, the international standard for conference systems.

System environment conditions

Working conditions fixed/stationary/portable

Temperature range

- Transportation: -40 °C to +70 °C

- Operation: 0 °C to + 45 °C

Max.relative humidity: < 95% (not condensing)

Safety: Compliant with EN 60065

EMC emission: Compliant with EN 55032

EMC immunity: Compliant with EN 55020

EMC approvals: CE, FCC

Power harmonic: Compliant with EN 61000-3-2

Voltage fluctuations and flicker: Compliant with EN 61000-3-3

6.2 Conference System main unit

6.2.1 Main unit

6.2.1.1 Physical characteristics

| | |
|-----------------------------|--|
| Conference system main unit | NCS-206M |
| Installation | Standard 19" rack |
| Dimensions (mm) | <p>The diagram shows a rectangular main unit with a width of 485mm and a height of 88mm. On the left side, there is a 'POWER' button. In the center, there are several indicator lights and a small display. On the right side, there is a 'Digital Conference System' label and a rectangular component with a diagonal dimension of 115.8mm.</p> |
| Color | Black |

6.2.1.2 Electrical characteristics

| | |
|-----------------------------|--|
| Conference system main unit | NCS-206M |
| Microphone capacity | ≤ 250 |
| Frequency response | 100Hz-15KHz |
| SNR | > 96dB |
| T.H.D | 0.1%@1kHz |
| Mains power supply | 240V AC 50/60Hz |
| Maximum power consumption | 350W |
| Audio output | + 18dBu balanced |
| Output Voltage | 24VDC |
| Control Interface | RJ45 Ethernet, D-type (female), connecting the central control system main unit (RS232C) |
| | RJ45 Ethernet, Connecting to PC |
| | RS422 connecting to high speed dome camera |
| Maximum power consumption | 350W |
| Connection | STP Cat5e (or above) Ethernet cable |
| Connector | RJ45 Ethernet |

6.2.2 Extension Unit

6.2.2.1 Physical characteristics

| | |
|-----------------|-----------------------|
| Extension Unit | NCS-206E |
| Installation | Bracket or table desk |
| Dimensions (mm) | |
| Color | Black |
| Weight | 2.1kg |

6.2.2.2 Electrical characteristics

| | |
|---------------------------|--------------------------------------|
| Extension Unit | NCS-206E |
| Mains power supply | 230V AC 50/60Hz |
| Output Voltage | 24VDC |
| Maximum power consumption | 350W |
| Connection | STP Cat5e (or above) Ethernet cable |
| Connector | RJ45 Ethernet |

6.3 Conference System Microphone

6.3.1 NCS-206 series conference unit

6.3.1.1 Physical characteristics

| | |
|-----------------------|---|
| Conference microphone | NCS-2060 / 2061 / 2062 series |
| Installation | Tabletop |
| Dimensions (mm) | |
| Color | Black |
| Weight | NCS-2060c/d: 1kg; NCS-2061c/d: 0.7kg, NCS-2062c/d: 0.85kg |

| | |
|-----------------------|---|
| Conference microphone | NCS-2062 series |
| Installation | Tabletop |
| Dimensions (mm) | <p>The drawing shows two views of the microphone. The front view is a rectangle with a height of 153mm and a width of 104mm. It features a circular microphone element at the top center and a horizontal slot at the bottom center. The side view shows a depth of 55mm.</p> |
| Color | Black |
| Weight | 1.3 kg |

8.3.1.2 Electrical characteristics

| | |
|-----------------------|---|
| Conference microphone | NCS-2062 series |
| Frequency response | 100Hz -15Khz |
| Connection | STP Cat6 Ethernet cable |
| Type | Uni-directional electret condenser microphone |
| Sensitivity | -44dB ± 2dB |
| Directivity | > 20dB (1 kHz) |
| Equivalent noise | 20 dBA (SPL) |
| Max. SPL | 125dB (THD < 3%) |

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