



# **USER MANUAL**

# **Professional Digital Conference System**

5G Wireless & Wired Dual Transmission  
Conference System



# Important Safety Instructions

---

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The MAINS plug serving as a disconnection device, should be easy to operate.
- The apparatus should be connected to the MAINS socket-outlet with protective earth.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Do not place the equipment on any uneven or unstable stand; original product package or appropriate package should be used to avoid damage caused by strong impacts during transportation.
- Power supply cords:
  - AC 100 V - 120 V 60 Hz or AC 220 V - 240 V 50 Hz
  - For service, please contact the nearest Service Center.
- All products are guaranteed for definite time (see the WARRANTY CARD for details) excluding the following cases:
  - A. All damage or malfunction caused by human negligence;
  - B. Damage or malfunction caused by improper operating by operator;
  - C. Parts damage or loss caused by disassembling the product by non-authorized personnel.
- Use ONLY specified connection cable to connect the system equipment.
- Upon receipt of the product, please fill out the Warranty Card enclosed and post it to Service Center.



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

**CAUTION:** To reduce the risk of electric shock, DO NOT open covers, no user serviceable parts inside. Refer servicing to qualified service personnel only.

**CAUTION:** DO NOT use alcohol, ammonia or petroleum solvents or abrasive cleaners to clean the devices.



The lightning flash with an arrowhead symbol, with an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

# Important Safety Instructions

---



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** To reduce the risk of fire or electric shock, DO NOT expose units to rain or moisture.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical or applicable local codes.



Power Disconnect: Units with or without ON – OFF switch have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON – OFF switch is in the ON position. The power cord is the main power disconnect for all units

**WARNING:** The apparatus should be connected to a mains socket outlet with a protective earthing connection.

# Contents

Chapter 1: Introduction.....	1
1.1 Summary .....	1
1.2 System technology .....	2
1.3 Application software .....	2
1.4 Functions & Features .....	3
Chapter 2: Conference System Controller.....	4
2.1 Conference System Controller .....	4
2.1.1 Function & Indication .....	4
2.1.2 Installation .....	6
2.1.3 Connection .....	6
2.1.4 Main functions.....	8
2.1.5 Setting & Operation .....	11
Chapter 3: Conference Unit.....	21
3.1 Summary .....	21
3.1.1 Conference unit .....	21
3.2 Countertop units .....	22
3.2.1 Function & Indication.....	22
Chapter 4: System Connection. ....	24
4.1 Summary .....	24
4.1.1 Connection principles .....	24
4.1.2 Transmission of wireless conference units .....	24
4.2 Connection between the controller and the conference unit ....	25
4.3 Connection with camera .....	26
Chapter 5: Working environment and maintenance.....	27
5.1 Public areas .....	27
5.2 Technical rooms .....	27
5.3 System operator room .....	27
Chapter 6: Technical specifications.....	28
6.1 System specifications .....	28
6.2 Conference System Controller .....	29
6.3 Conference System Unit .....	31

# Chapter 1: Introduction

## 1.1 Summary

This series of products is a new intelligent digital wired & wireless dual transmission video tracking conference system, which perfectly introduces all digital technology, high-frequency transmission, and comprehensive network technology into the conference system and fully combines them perfectly. The system supports the simultaneous use of wireless and wired conference microphones. Users can greatly increase the flexibility of system installation according to their own needs, and can work with the intelligent central control system, The video conference system and monitoring fire protection system achieve seamless connection, providing a more complete solution for efficient modern conference system engineering.

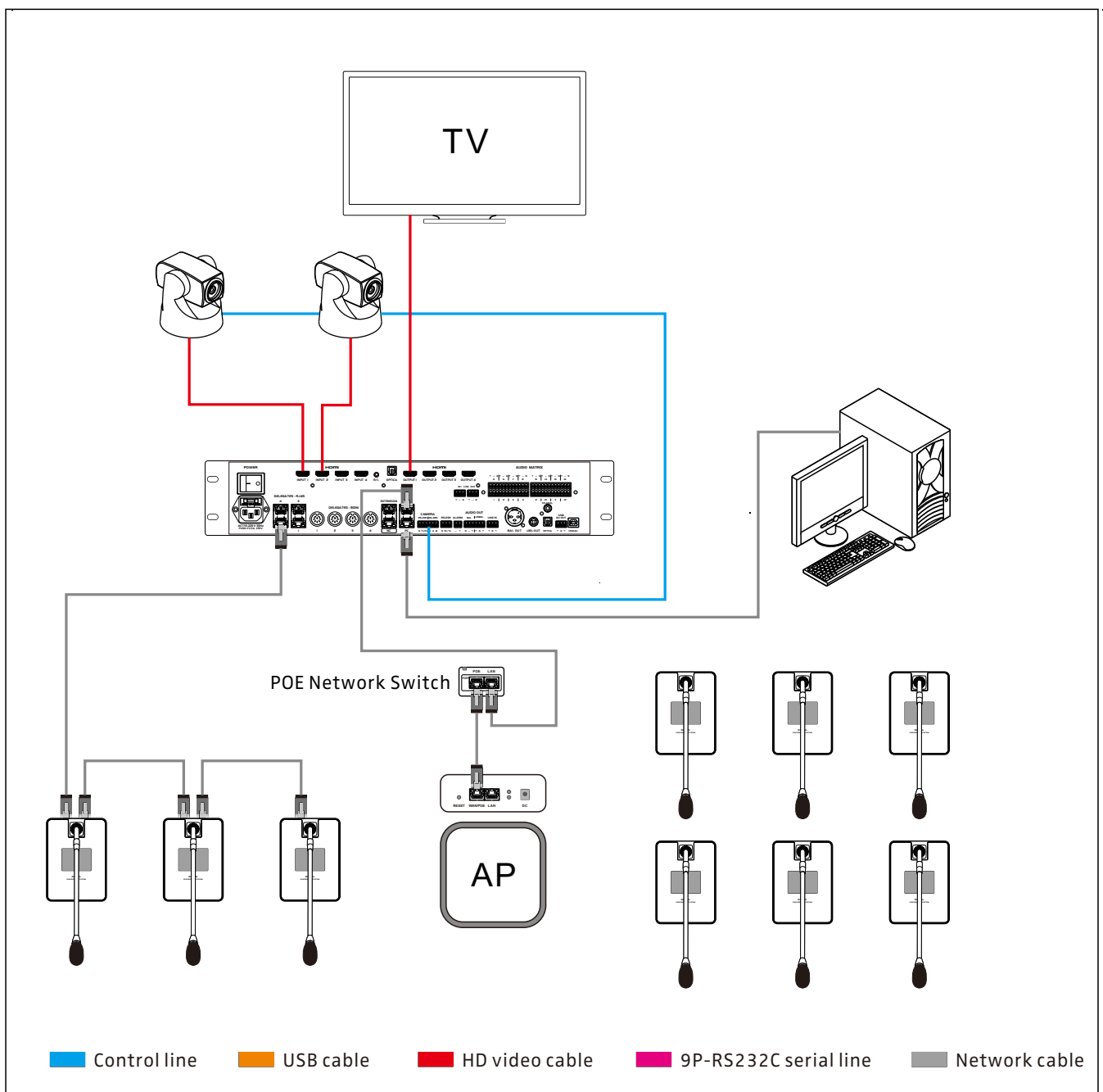


Figure 1.1 System overview

## 1.2 System technology

### 1. conference system controller

The conference system controller is the core equipment of the digital conference system, which supplies power to all conference units and serves as a bridge for connection and control between system hardware and system application software. The conference system controller can run independently and achieve basic conference control functions; Combined with system software, it can achieve more powerful management and control functions. This series of conference systems supports wireless and wired dual transmission. Each system supports maximum 5300 wired conference units and 300 wireless conference units, and supports maximum 8 wired conference units and 6 wireless conference units speaking at the same time.

### 2. Conference Unit

The system controller supports a variety of conference units, and is equipped with a variety of models according to different needs, ranging from wireless desktop, wired desktop, wired embedded, and wired conference units with speakers, The appearance of the microphone unit is humanized, which is convenient for users' various needs.

### 3. Accessories

Some special accessory equipment is involved in the connection and use of the system, including: connecting cable, antenna, wiring base, headset, video Graphics card and other devices.

## 1.3 Application software

The supporting software of the system is rich and complete, and has the characteristics of simple operation, safety and reliability, and easy maintenance. byThe connection line of the system is integrated with all conference system equipment as a whole, and the operator can centrally check the conference system. The system implements all-round control, which simplifies operation and improves efficiency.

The conference system software adopts modular design, including:

1. Unit detection module
2. Conference control module
3. System control module
4. Personnel management module
5. Conference control module
6. System control module
7. User management module

## 1.4 Functions and Features

### 1. Discussion function microphone settings

- 5 "speaking modes" can be set:
  - ◆ "FIFO" : If the maximal number (1-8) of active delegate microphones has been reached and if another delegate unit is activated, the delegate unit switched on first will be switched off first automatically
  - ◆ "NORMAL" : If the maximal number of active microphones, previously fixed, has been reached, delegates requesting to speak join a request-to-speak list. The first unit joining the list will become active when the active unit gets off.
  - ◆ "APPLY" : When the delegate presses the microphone ON/OFF button to request to speak, the chairman unit can approve or reject his/her request.
  - ◆ "VOICE" : The delegate's microphone is activated when spoken into.
- Support maximum 8 wired conference units and 6 wireless conference units speaking at the same time

### 2. Supports extended functions

- The main unit supports extended functions, supporting maximum 5300 wired conference units and 300 wireless conference units, which meets the requirements of the international conference program.

### 3. Camera automatic tracking function

- Equipped with "SONY VISCA, PELCO P, PELCO D" communication protocol cameras can realize automatic tracking function and can record and record the panorama of the venue and speakers.

### 4. Comprehensive meeting management

- Conference office automation, arrange routine and tedious work in an orderly manner, process and release various information and data in the most timely manner;
- Provides comprehensive control functions on the venue environment, meeting progress, and delegate arrangements.

### 5. Perfect anti-radio frequency interference performance (such as mobile phones)

- The anti-interference circuit design prevents all mobile phone signal interference.

### 6. Multi-room configuration function

- Multiple conference system controllers can be used as independent conference systems, or can be easily expanded to form a large-scale conference system. By setting the working mode of the mainframe as master mode or slave mode, flexible multi-room configuration functions can be realized.



# Chapter 2 Conference System Controller

The main unit of the conference system is the core equipment of the digital conference system. It communicates for all conference units, and is also the connection and control bridge between system hardware and system application software. The conference system controller can run independently to realize basic conference control functions; with the system software, it can realize more powerful management and control.

Each system supports maximum 5300 wired conference units and 300 wireless conference units, and supports maximum 8 wired conference units and 6 wireless conference units speaking at the same time.

## Product model:

### QCC WW5G5680H

5G Full function digital wired & wireless dual transmission conference system controller  
(Discussing, Video tracking & voting)

## 2.1 conference system controller

### 2.1.1 function and indication

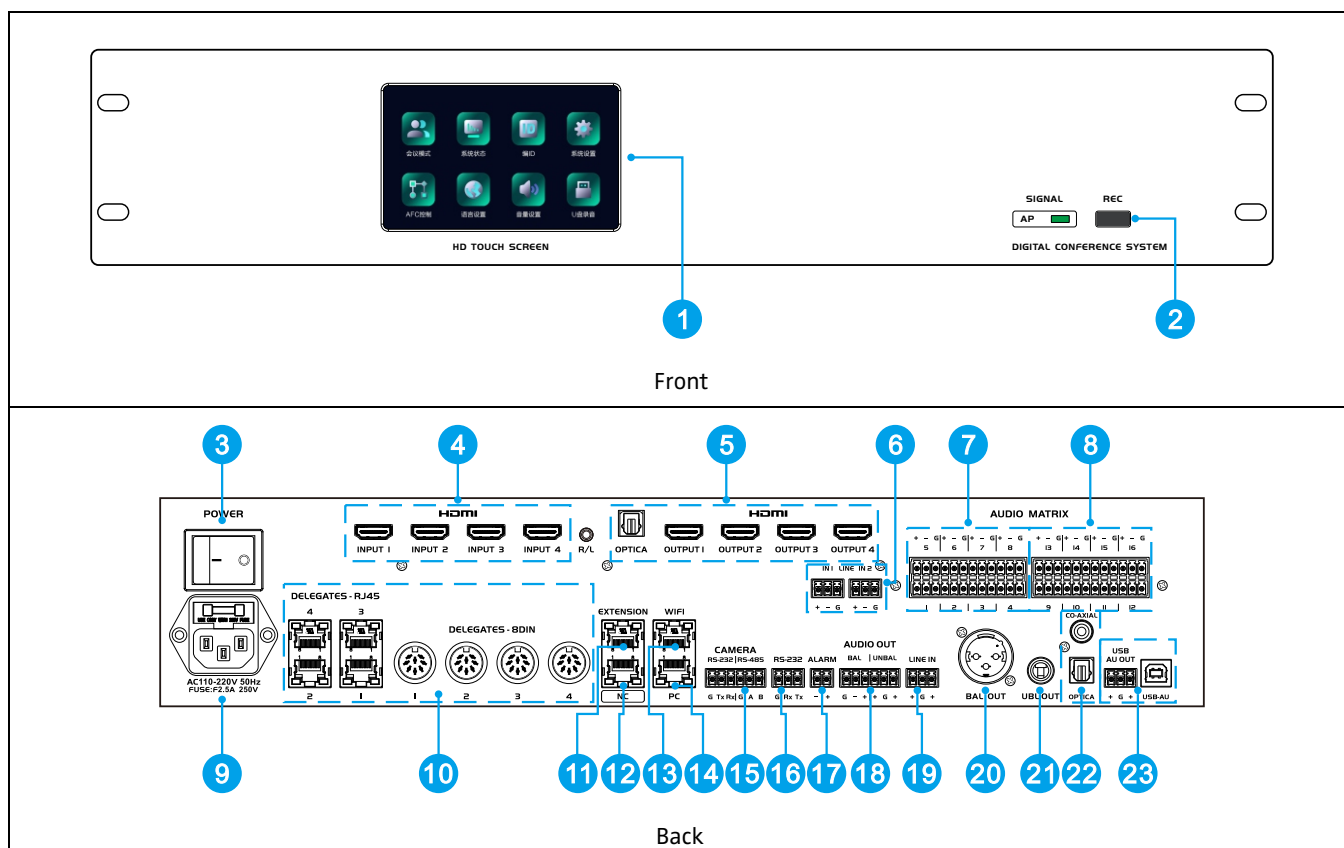


Figure 2.1 Front and rear panels

## 2.1 conference system controller

### 2.1.1.1 Front panel

1. USB recording output port
2. HD 4.3-inch touch screen

### 2.1.1.2 Rear panel

3. Power switch
4. HDMI input port 1-4 (optional)
5. HDMI output port 1-4 and video optical fiber output port(optional)
6. Original sound channel line input interface  
(Phoenix plug interfacex2/ balanced input)(optional)
- 7-8. 16-channel multi-functional output audio matrix,  
can be flexibly adjusted to phased output mode, simultaneous transmission output  
mode, role separation output mode (optional)
9. Power input interface (use a three-pin grounding plug)
10. Conference unit interface (RJ45x2 groups)  
Conference unit interface (8-DINx4 channels)
11. Data expansion interface
12. DANTE digital audio output (optional)
13. WIFI network interface for connecting with wireless AP to manage wireless microphones
14. USB local communication connection interface
15. Camera 232 communication interface, 485 communication interface (Phoenix plug interface)
16. Central control system 232 interface (Phoenix plug interface)
17. Fire alarm audio signal input (Phoenix plug interface)
18. Original sound channel line output interface  
(Phoenix plug interface, balanced x1/unbalanced x2)
19. Background music audio input port (Phoenix plug connectorx2/unbalanced input)
20. Original sound channel line output interface (3-core XLR balanced output)
21. Original sound channel line output interface (6.3mm jack/unbalanced output)
22. Optical fiber output interface, coaxial output interface
23. USB sound card audio output interface (Phoenix plug connectorx2/unbalanced)  
USB sound card connector

## 2.1.2 Installation

The conference system controller can be installed on a standard 19-inch cabinet. There are two screw holes on each side of the controller panel. Use snailsFix the four holes①with the wire.



Figure 2.2 Installation

## 2.1.3 Connection

### 2.1.3.1 Connection with wireless conference unit

The conference system controller has 1 channel of AP interfaces, and it is necessary to correctly connect the controller to our original AP equipment to ensure the normal operation of the system, as shown in Figure 2.3

Remark: The conference system controller must be connected to the LAN port of the POE switch, and the AP should be connected to the POE port of the POE switch. Otherwise, the devices will not work properly.

### 2.1.3.2 Connection with wired conference unit

The conference system controller has 2 groups of 4 Channel RJ45 microphone unit interfaces and 4 Channel 8P-DIN conference unit output interfaces. The system comes with a male standard cable (RJ interface) and the corresponding connection line delivered with the base .

When the controller is connected to the conference unit, just connect the RJ interface network cable of the first conference unit to the output interface of the controller.

### 2.1.3.3 Connection with auxiliary equipment

The system controller has diversified auxiliary equipment interfaces, and with different auxiliary equipment, it can realize the input and output of signal and audio signals.

### 2.1.3.4 Expansion connection with conference controller

By connecting the expansion controller, the system can connect up to 5300 speaking units, as shown in Figure 2.4

### 2.1.3 Connection

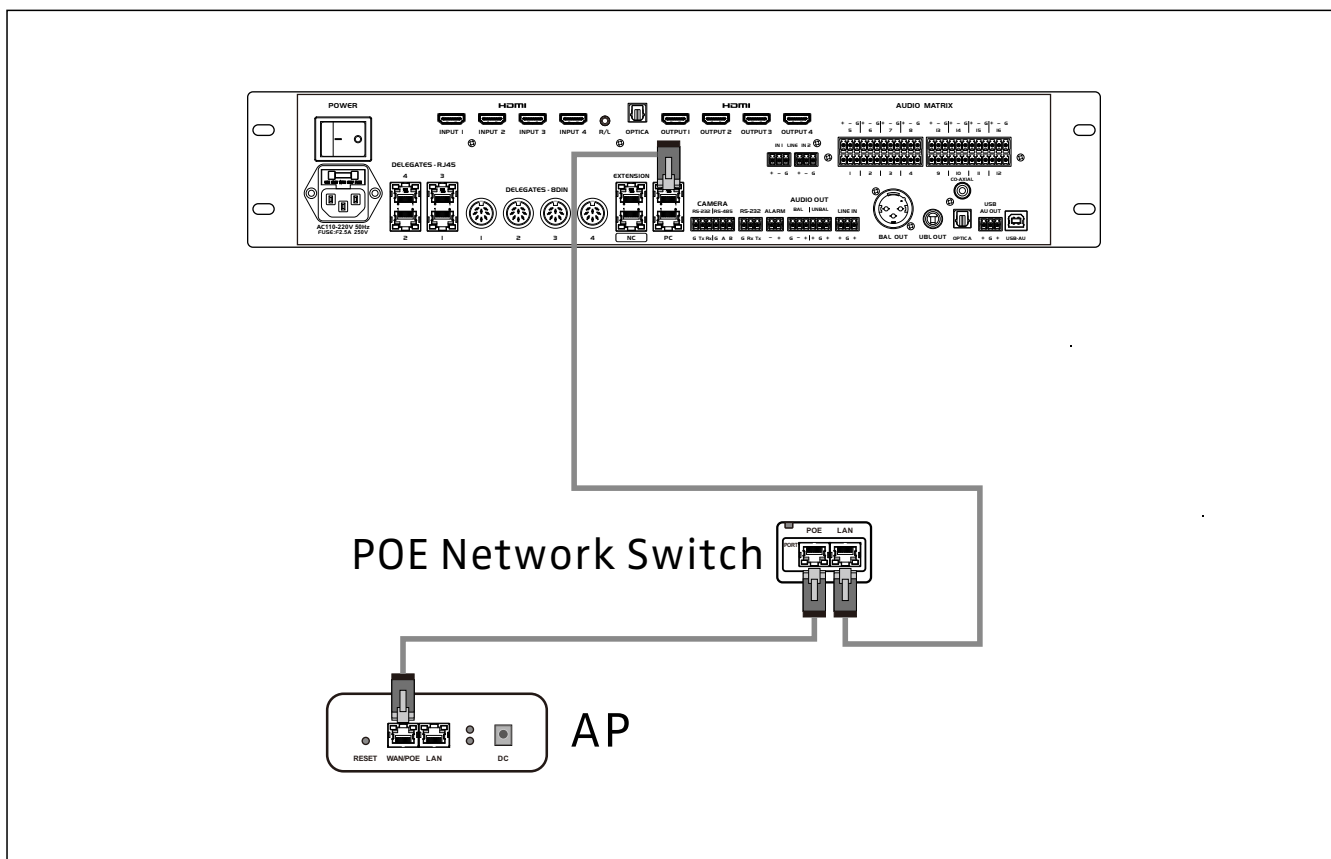


Figure 2.3 Connection with the AP

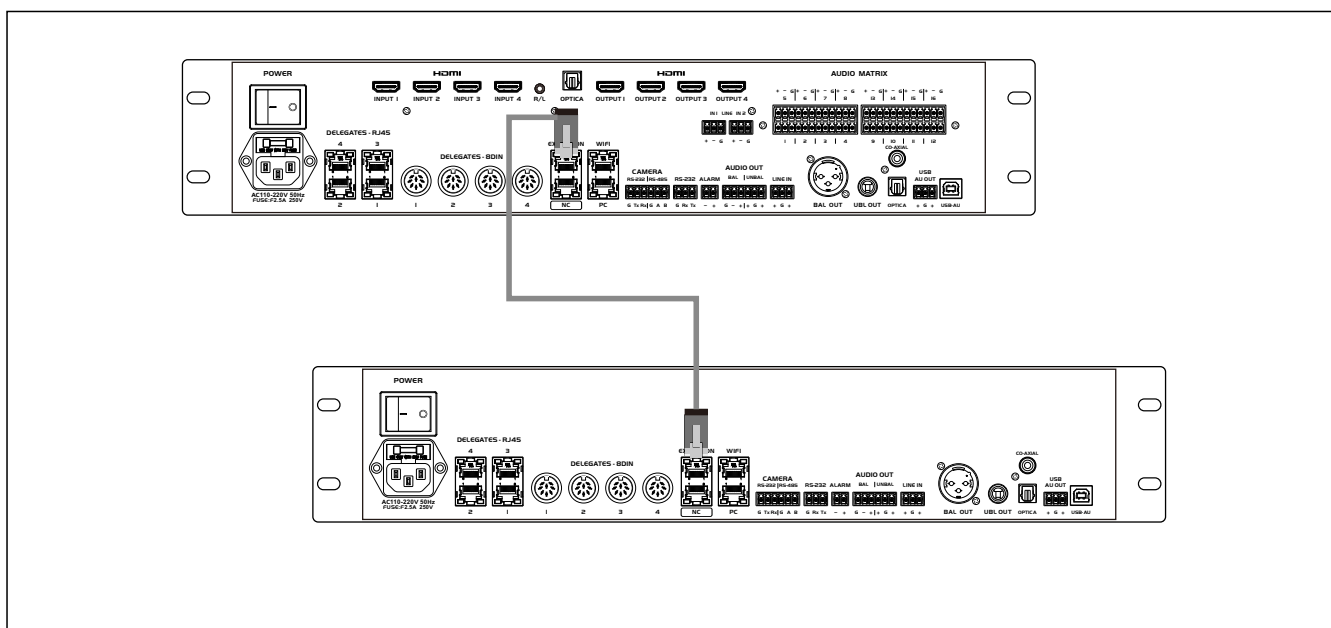


Figure 2.4 Connection with expansion host

## 2.1.4 Main functions

1. Adopting all-digital conference technology, developed based on digital network architecture, it can realize the transmission of 64-channel audio and various information in one network cable, and support wired and wireless conferences at the same time.
2. Adopting high-fidelity lossless digital audio transmission technology, and with digital network audio clock synchronization transmission technology, the end-to-end audio delay is less than 5ms, and supports non-compressed audio transmission with a sampling rate of 48K, so that the conference sound quality can be restored with high fidelity
3. Adaptive interference avoidance technology to achieve stronger anti-interference ability, based on WiFi6 that complies with IEEE 802.11n standards, and supports 2.4GHZ, 5GHZ, and multiple signals are available
4. Adopting intelligent anti-interference technology, combined with digital circuit design, to eliminate electromagnetic interference from mobile phones and other electronic products
5. With 24 digital transmission signals, multiple wireless systems can be used in the same place, and mutual interference with other wireless products in the venue can be avoided.
6. Supporting the ring hand-in-hand function to ensure that the meeting can continue normally when one of the network cables is disconnected or the microphone fails.
7. With a 4.3-inch 800\*480 full-view IPS capacitive touch screen to intuitively display and conveniently adjust the system's parameters, and supports arbitrary switching of Chinese, English, Russian, and French languages.
8. The PC software can view the battery power, WiFi signal and other information status of the online wireless microphone; it supports one-click turning off all wireless microphones and turning off a wireless microphone separately.
9. Support USB recording, high-fidelity WAV format output
10. The system supports a maximum of 5,300 wired conference units and 300 wireless conference units, and supports a maximum of 8 wired conference units and 6 wireless conference units speaking at the same time.
11. The wired unit adopts a "hand-in-hand" connection method, supports hot-swap hot-swap function, and automatically restores the original function when plugged in again, which is convenient for installation and maintenance.
12. With multiple conference modes: FIFO (first-in-first-out mode), NORMAL (normal mode), VOICE (voice control mode), APPLY (application mode).
13. With conference service functions, and the speaking unit can apply for tea, pens, help and other services.
14. The system has functions such as initiating conference sign-in, voting, election, rating, satisfaction, customization, etc., and with PC software, more voting methods can be realized, for example:
  - a) Voting method: Agree/Abstain/Oppose
  - b) Election method: 1/2/3/4/5
  - c) Rating/Satisfaction method: --/-/0/+ /++
15. Adopting high-performance DSP digital audio processing technology, it supports 16-channel audio matrix, howling suppression, 10-band EQ adjustment, volume dB value adjustment, and delay adjustment.
16. Built-in howling suppression function (Optional)

#### 2.1.4 Main functions

- 17.Support a single conference controller to achieve 16 independent partition output and merged audio of grouped audio.
- 18.With 16-channel wired and wireless role separation output mode, which can make wired or wireless microphones output independently according to ID numbers, and supports  $\geq 128$  independent audio outputs of wired microphones or wireless microphones, and supports independent recording of each microphone through recording software, or voice transcription equipment docking to achieve role separation.
- 19.With 16-channel simultaneous transmission output mode, which can make the translator audio output independently according to the channel number, which can be used for recording or monitoring equipment. And the number of output channels can be expanded through external devices.
- 20.With 16-channel phased output mode, built-in nx16 audio matrix processor, and realizes 16-channel group output function. Any input source (including all input sources and online microphones) can be output to any channel at any volume ratio.
- 21.Supports sound partition output function, and the volume of each partition is automatically adjusted according to the microphone opening position, so as to achieve a farther pickup distance without howling.
- 22.The system uses TCP/IP network protocol and supports C/S and B/S architectures. It can be set and controlled by PC software or web pages. The computer supports importing live pictures for simulated ranking.
- 23.The device has client and WEB control methods. Through the client or WEB, the audio matrix parameters (including EQ, volume, delay, microphone sensitivity, etc.),  $\geq 16$  channel output mode switching, switch microphone synchronization, four language switching of Chinese, English, Russian and French, and control of role separation host can be adjusted.
- 24.Support to control audio matrix parameters (including EQ, volume, microphone sensitivity, etc.), 16 channel output mode switching, switch microphone synchronization, and control role separation host.
- 25.With 10-band EQ adjustment function. Both 16 multi-function output channels and 2 LINEOUT output channels have 10-band EQ adjustment function.
- 26.Support simultaneous interpretation system, and can transmit 63+1 wired simultaneous interpretation at the same time.
- 27.The system is deeply adapted to the voice transcription system. The systems exchange data through the network cable to realize the role-separated voice transcription function.
- 28.With host dual-machine hot standby backup function, and can set the host or slave function. When the host fails or loses power, it can automatically switch to the slave operation to realize the dual backup function.
- 29.With 4 x RJ45 microphone unit interfaces and 4 8-core microphone unit interfaces.
- 30.With 1 x RJ45 data expansion interface, which can be connected to the conference system expansion device.
- 31.With Dante protocol audio output and can communicate with other Dante audio devices.  
(Optional)

#### 2.1.4 Main functions

- 32. With 1 x RJ45 WIFI interface, which can be connected to a wireless router.
- 33. With 1 x RJ45 PC interface, which can be connected to a PC for control and management.
- 34. With camera 232 and 485 communication interfaces (6P Phoenix plug), which can connect standard-definition or high-definition cameras and support SONY VISCA and PELCO P/D communication protocols.
- 35. With central control code 232 interface (3P Phoenix plug), which can be connected to the central control system and supports secondary development of the SDK development package.
- 36. With fire alarm linkage trigger interface, which supports real-time detection of smoke alarms. After triggering, the alarm information will be synchronized to the microphone interface and the host interface.
- 37. With 2 x balanced audio output interfaces (3P Phoenix plug and XLR Canon), 3 x unbalanced audio output interfaces (3P Phoenix plug x2 and 6.35mm audio interface x1), and 16 x audio matrix output interfaces (3P Phoenix plug). Each output channel can adjust 10-band EQ, delay, volume dB value and other parameters.
- 38. With 2 x balanced audio input interfaces (3P Phoenix plug) and 2 x unbalanced audio input interfaces (2P Phoenix plug), which can input external audio signals (such as background music or remote voice signals).
- 39. With optical fiber extension interface, the sound quality is not attenuated during long-distance transmission, and two remote conference rooms can be merged into one.
- 40. With 1 USB sound card interface and 2 sound card unbalanced output interfaces (2P Phoenix plug), it can be connected to a computer for remote conferencing.
- 41. Supports 4 camera access, 4K image quality, 4-input and 4-output HDMI seamless video tracking switching, camera audio output, and optical fiber video transmission. (Optional)

### 2.1.5 Setting and operation

After completing the system installation and connection, you need to set up the conference system controller before the conference starts. The controller menu structure is shown in the figure below:

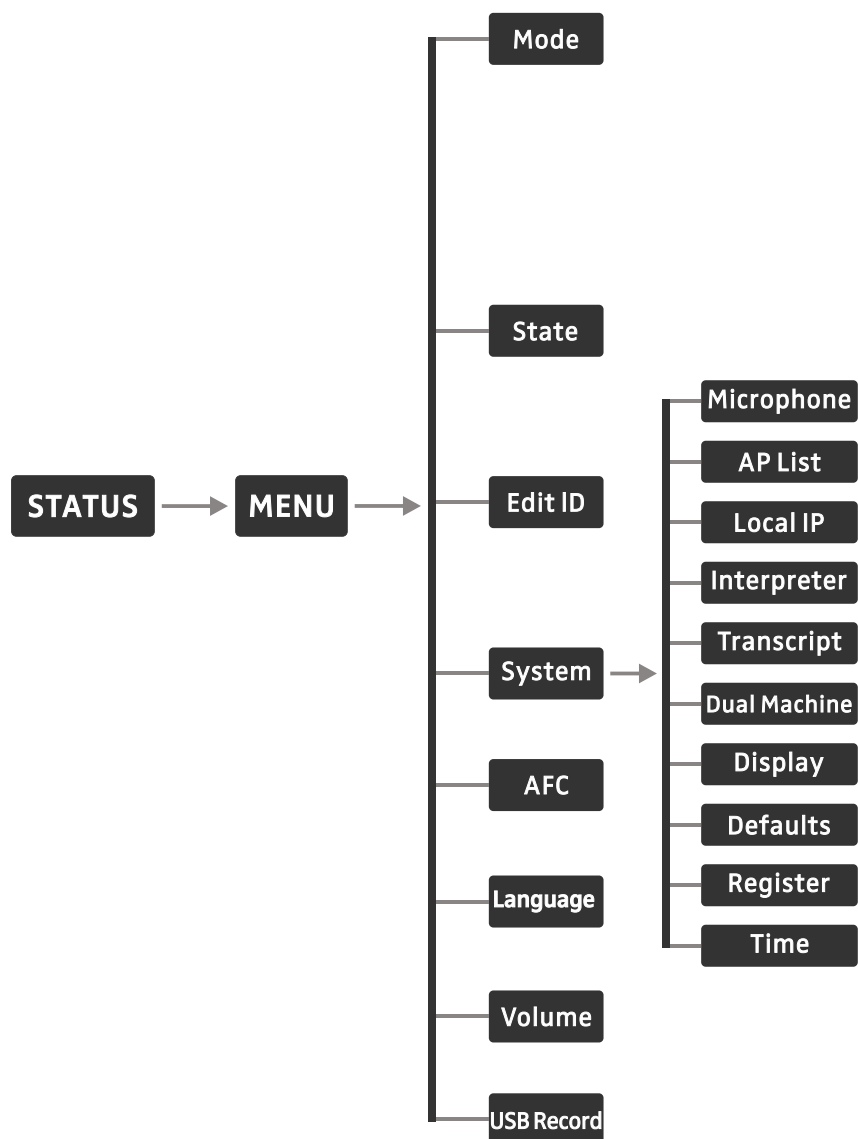


Figure 2.6 Menu of controller



## A. Power on initialization

After connecting, press the power switch and the controller will enter the boot screen, as shown in Figure 2.6.1



Figure 2.6.1

After 2 seconds, it will automatically enter the standby mode, Swipe the screen to enter the main interface, as shown in Figure 2.6.2&2.6.3:

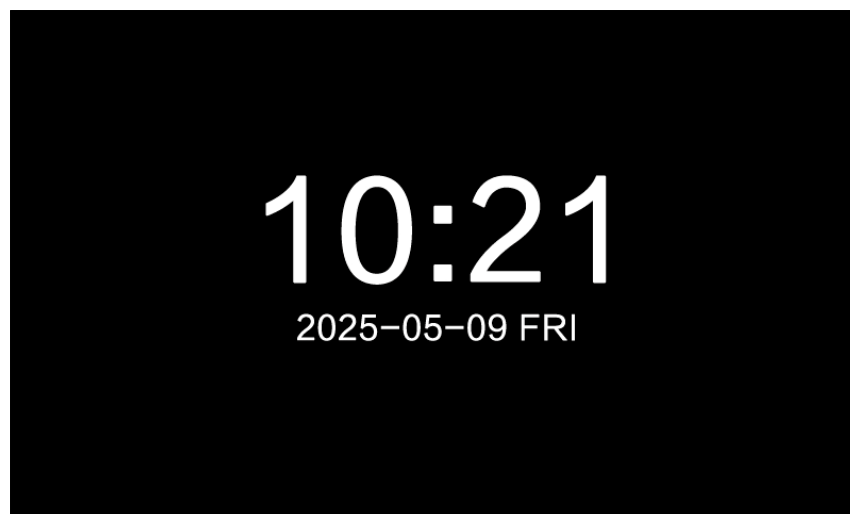


Figure 2.6.2

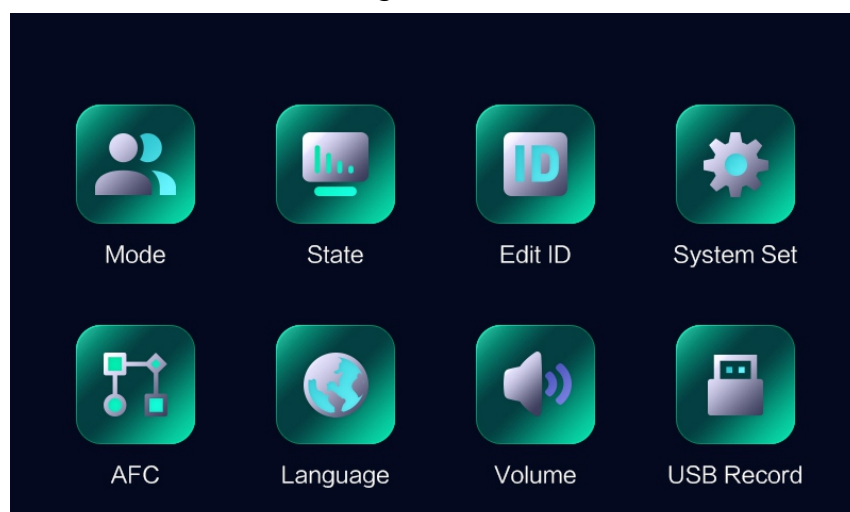


Figure 2.6.3

### 2.1.5.1 Meeting mode

Press the "Mode" icon to enter the conference mode setting menu, as shown in Figure 2.6.4

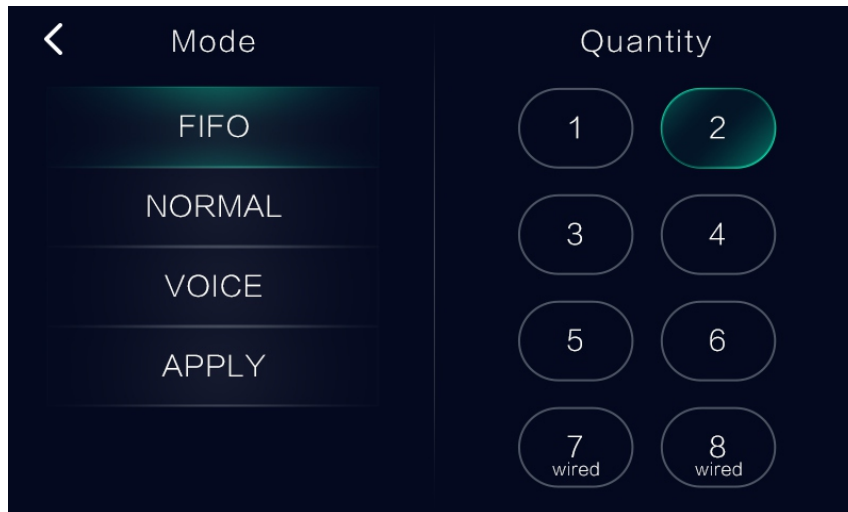


Figure 2.6.4

#### 1.Mode

Set the mode of microphone unit speaking on and off

“FIFO” : If the maximal number (1-8) of active delegate microphones has been reached and if another delegate unit is activated, the delegate unit switched on first will be switched off first automatically

“NORMAL”: If the maximal number of active microphones, previously fixed, has been reached, delegates requesting to speak join a request-to-speak list. The first unit joining the list will become active when the active unit gets off.

“APPLY” : When the delegate presses the microphone ON/OFF button to request to speak, the chairman unit can approve or reject his/her request.

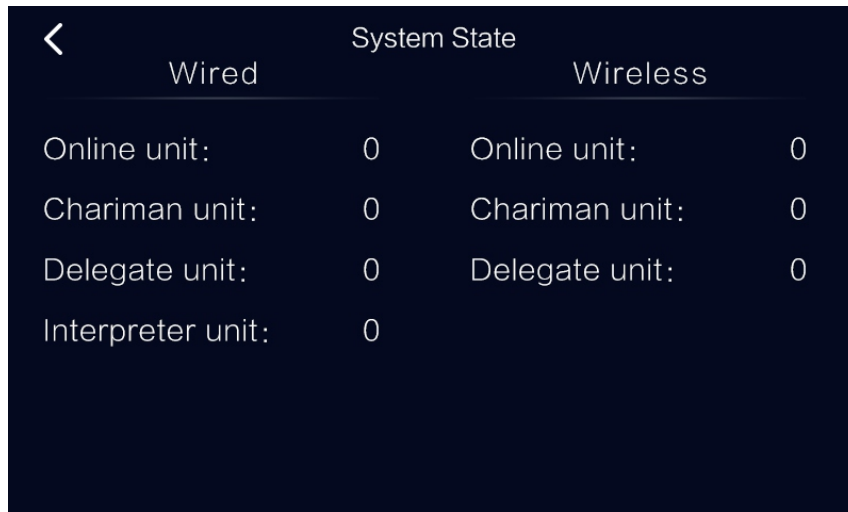
“VOICE” : The delegate’s microphone is activated when spoken into.

#### 2.Quantity

The “FIFO” speak mode is generally set to the maximum number of microphones allowed to be turned on at the same time, N (wired=1/2/4/8;wireless=1/2/4/6),with a maximum of 6 wireless microphones allowed to be turned on. The speak mode will apply to both wired and wireless microphones simultaneously. For example, if the wired microphone mode is set to "FIFO" speak mode, then the wireless microphone mode will also be set to the "FIFO" speak mode.

### 2.1.5.2 System State

Press the "System State" icon to enter the system state menu, as shown in Figure 2.6.5



The screenshot shows a dark-themed menu titled "System State". It is divided into two columns: "Wired" and "Wireless". Each column lists four unit types with their respective counts, all of which are currently zero.

System State			
Wired		Wireless	
Online unit:	0	Online unit:	0
Chariman unit:	0	Chariman unit:	0
Delegate unit:	0	Delegate unit:	0
Interpreter unit:	0		

Figure 2.6.5

#### 1. System State

From the main function menu, enter the system state menu to view the quantity and classification of all currently online units. The current system only includes chairman unit, delegate unit and interpreter unit. To observe real-time system status changes, you may plug or unplug the chairman unit or delegate unit (the main controller's detection time for plug/unplug operations is up to 1 minute when the system is idle).

If the display is not updated immediately, please wait patiently for the status to change for verification. Frequent plugging/unplugging of units is prohibited during operation).

### 2.1.5.3 Edit ID

Press the "Edit ID" icon to enter the edit unit ID menu, as shown in Figure 2.6.6

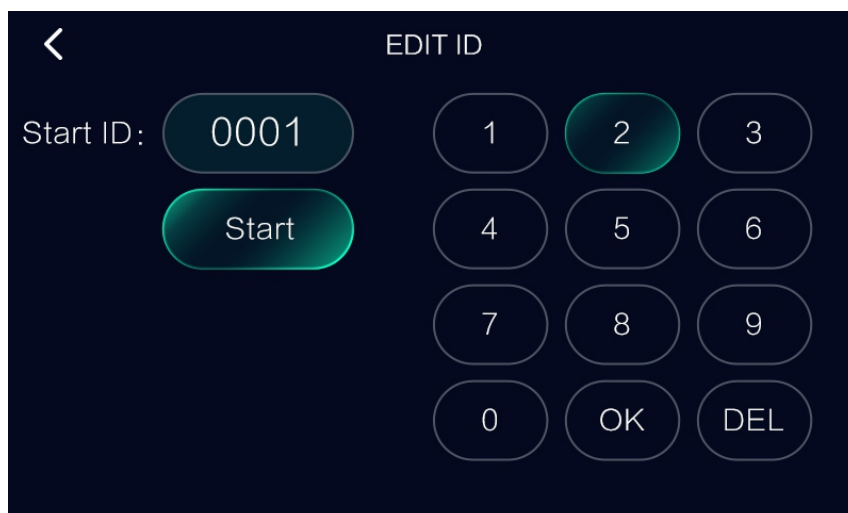


Figure 2.6.6

Enter the Edit ID menu from the main function menu to set the microphone's ID number. If need to change the start ID number, click the start ID number icon and use the keyboard to set the start ID number (range from 1–4095). When the start ID exceeds 300, the start ID number of wireless microphones will start from 1, because the maximum number of wireless units is 300. After setting, click "OK" to save the modification. Click "Start" to edit ID. At the same time, can manually edit ID through the On/Off key of the microphones (the unit will display its own ID and the current available ID). When the red indicator light of the unit lights up after pressing, it means the operation is successful (the current ID is set as the unit's ID). Click "End" to exit the Edit ID status.

### 2.1.5.4 System Setting

Press the "System Setting" icon to enter the system settings menu, as shown in Figure 2.6.7

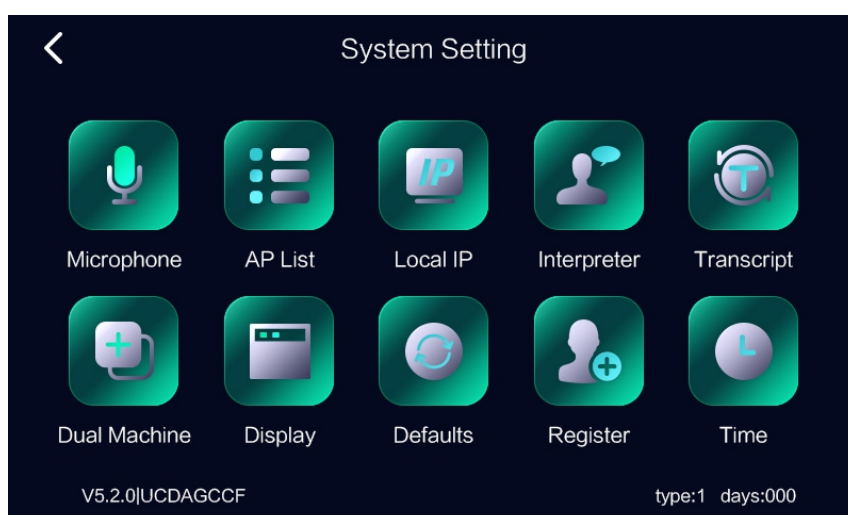


Figure 2.6.7

### 1. System Setting

Enter the System Setting menu from the main function menu, where 8 sub-items are available for selection. The current version number is displayed in the bottom-left corner.

### 2.1.5.5 AFC

Press the "AFC" icon to enter the AFC setting menu, as shown in Figure 2.6.8

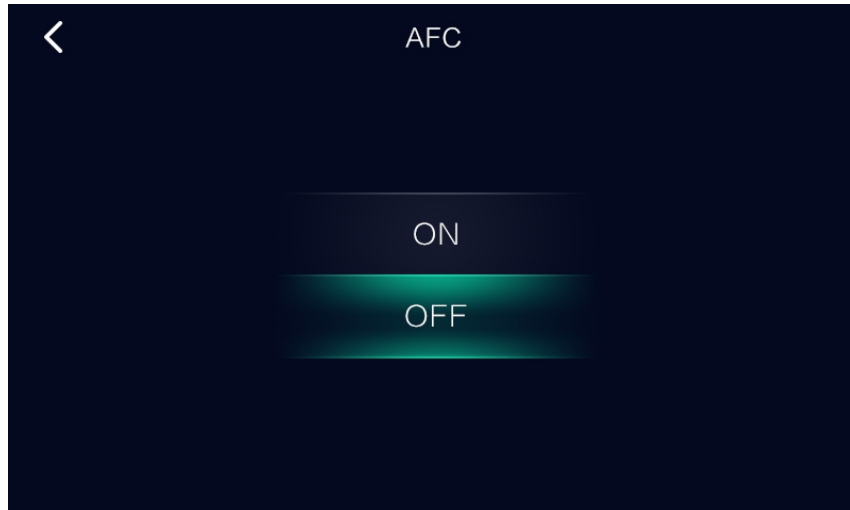


Figure 2.6.8

#### 1.AFC control

Open or close the howling suppression function.

### 2.1.5.6 Language

Press the "Language" icon to enter the language setting menu, as shown in Figure 2.6.9

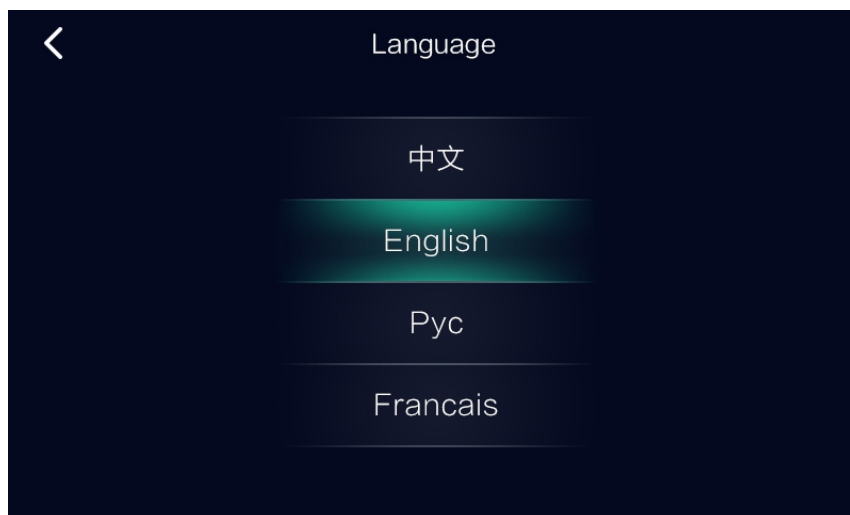


Figure 2.6.9

#### 1.Language Setting

Set the language of the current system, supporting Chinese/English/Russian/French 4 languages.

### 2.1.5.7 Volume Setting

Press the "Volume" icon to enter the Volume setting menu, as shown in Figure 2.7.0



Figure 2.7.0

#### 1.Volume Setting

Wiring Method for Equipments: connect the external audio source to the background music input port LINE IN 1/2 then output from LINE OUT 1/2 to the power amplifier and speaker equipments .

Enter the volume adjustment from the main function menu. Adjust the volume levels by using the +/- buttons then you can hear the actual changes of the music. The volume adjustment range is from 0 to 31, where 0 indicates that the background music is muted.

### 2.1.5.8 Defaults

Press the "Defaults" icon to enter the defaults setting menu, as shown in Figure 2.7.1

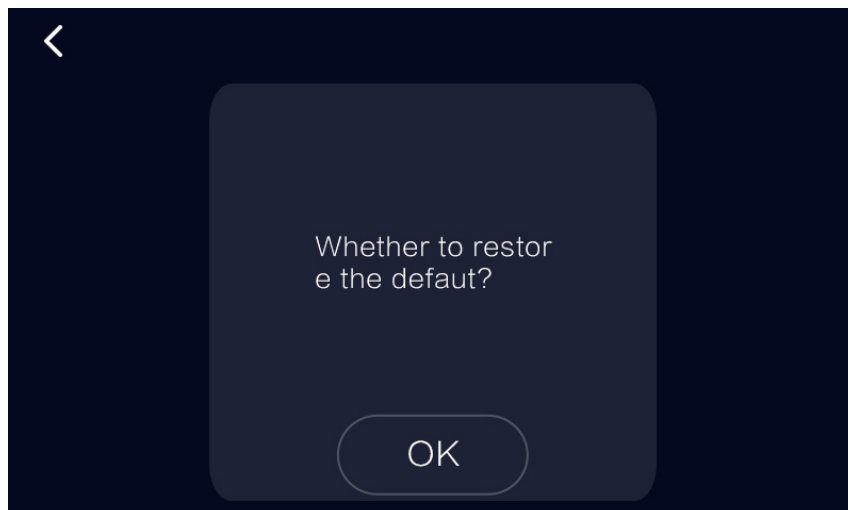


Figure 2.7.1

#### 1.Defaults

Enter the Defaults menu to confirm "whether to restore the default?" Defaults setting will restore the device to its original factory settings. The default parameters are as follows:

Meeting Mode: FIFO, Number of Wired Microphones: 8, Number of Wireless Microphones: 6  
Start ID: 0001

Touchscreen display language: English

Initial volume for LINE OUT1/2: 31

Local IP: 192.168.11.168 NetMask: 255.255.255.0 Gateway: 192.168.11.1

### 2.1.5.9 Local IP

Press the "Local IP" icon to enter IP-INFO setting menu, as shown in Figure 2.7.2



IP-INFO

IP address: 192.168.11.168

Gateway: 192.168.11.1

Mask: 255.255.255.0

SET

Figure 2.7.2

#### 1. Local IP

"IP address": It is a unified address format provided by the IP protocol. It assigns a logical address to each network and each host on the Internet to shield the difference in physical addresses. System PC software or WEB The IP address of the login interface must be consistent with the host setting before you can log in and use it.

"Gateway": A distributed database on the Internet that maps domain names and IP addresses to each other, enabling users to access the Internet more conveniently. Through the host name, the process of finally obtaining the IP address corresponding to the host name is called domain name resolution.

"Mask": Indicate which bits of an IP address identify the subnet where the controller is located and which bits identify the bit mask of the host. The subnet mask cannot exist alone, it must be used in conjunction with the IP address. The subnet mask has only one function, which is to divide an IP address into two parts, the network address and the host address.

### 2.1.6.0 Unit Control

Press the "Microphone" icon to enter the Unit Control menu, as shown in Figure 2.7.3

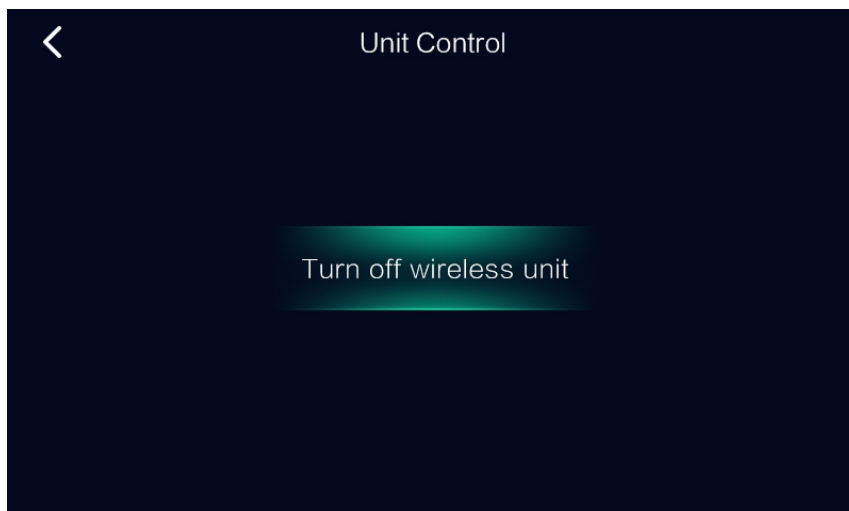


Figure 2.7.3

#### 1. Unit Control

This function is used to turn off all wireless conference units at once after the conference.

### 2.1.6.1 USB Record

Press the "USB Record" icon to enter the USB recording menu, as shown in Figure 2.7.4

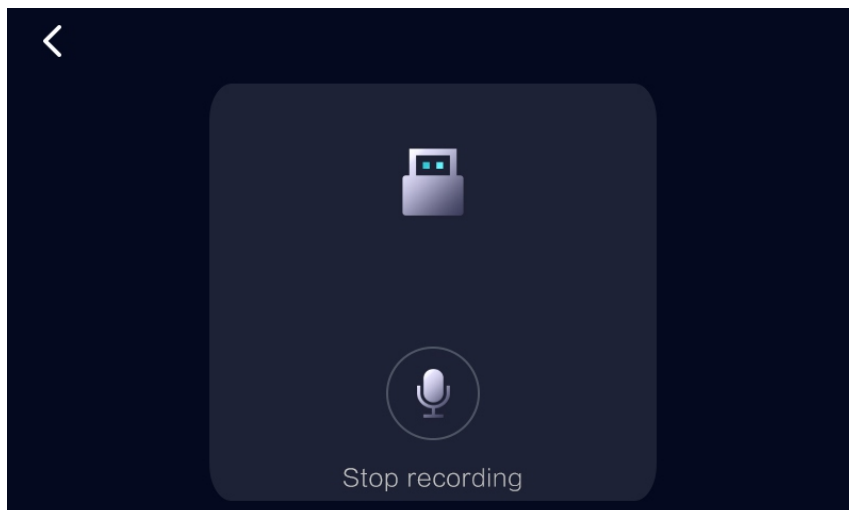


Figure 2.7.4

#### 1. USB Record

Enter the USB record menu. If a USB drive is already inserted, background music can be played or the USB can record the mixed audio from LINE IN and microphones.

If no USB drive is inserted, when enter the USB record menu, it will display "Please insert USB."

Notes: 1) Please use the matching USB drive provided with the device.

2) Audio files can only be stored in the designated AUDIO folder.

3) The USB drive supports a maximum capacity of 16GB. Use the original factory-provided USB drive.



### 2.1.6.2 Fire Alarm

By short-circuiting the two signal pins of the ALARM output at the back of the conference main controller (simulating the transmission of a fire alarm signal to the controller), the display of the conference controller and the microphone display will both indicate the alarm signal. When the interface detects the cancellation of the fire alarm (i.e., an open circuit), it will automatically return to normal.

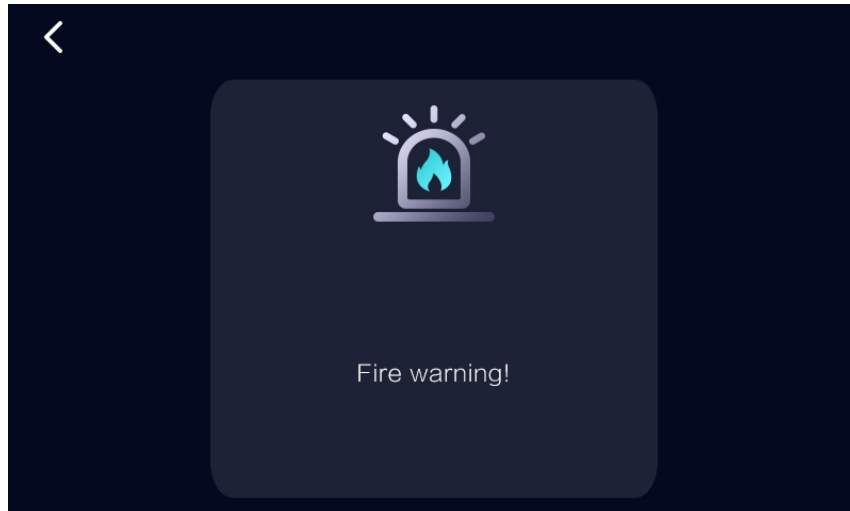


Figure 2.7.5

# Chapter 3 Conference Unit

## 3.1 Summary

Conference units refer to the basic equipment units used by attendees to participate in conference. Depending on the type of conference unit, attendees can access different functions, including listening, speaking, requesting to speak, and receiving screen display information.

### 3.1.1 Conference unit

Conference unit provides speaking function.

Conference unit includes chairman unit, delegate unit.

Conference unit be divided into various types based on their appearance, which can meet the diverse selection needs of different users.

#### Product

#### model:

**QCC WW5G5680H:**

#### Countertop

**QCM WW5G5680C**

Wireless camera tracking conference system chairman unit  
(2.4-inch IPS full view TFT, touch buttons)

**QCM WW5G5680D**

Wireless camera tracking conference system delegate unit  
(2.4-inch IPS full view TFT, touch buttons)

## 3.2 Countertop units

### 3.2.1 Function and indication

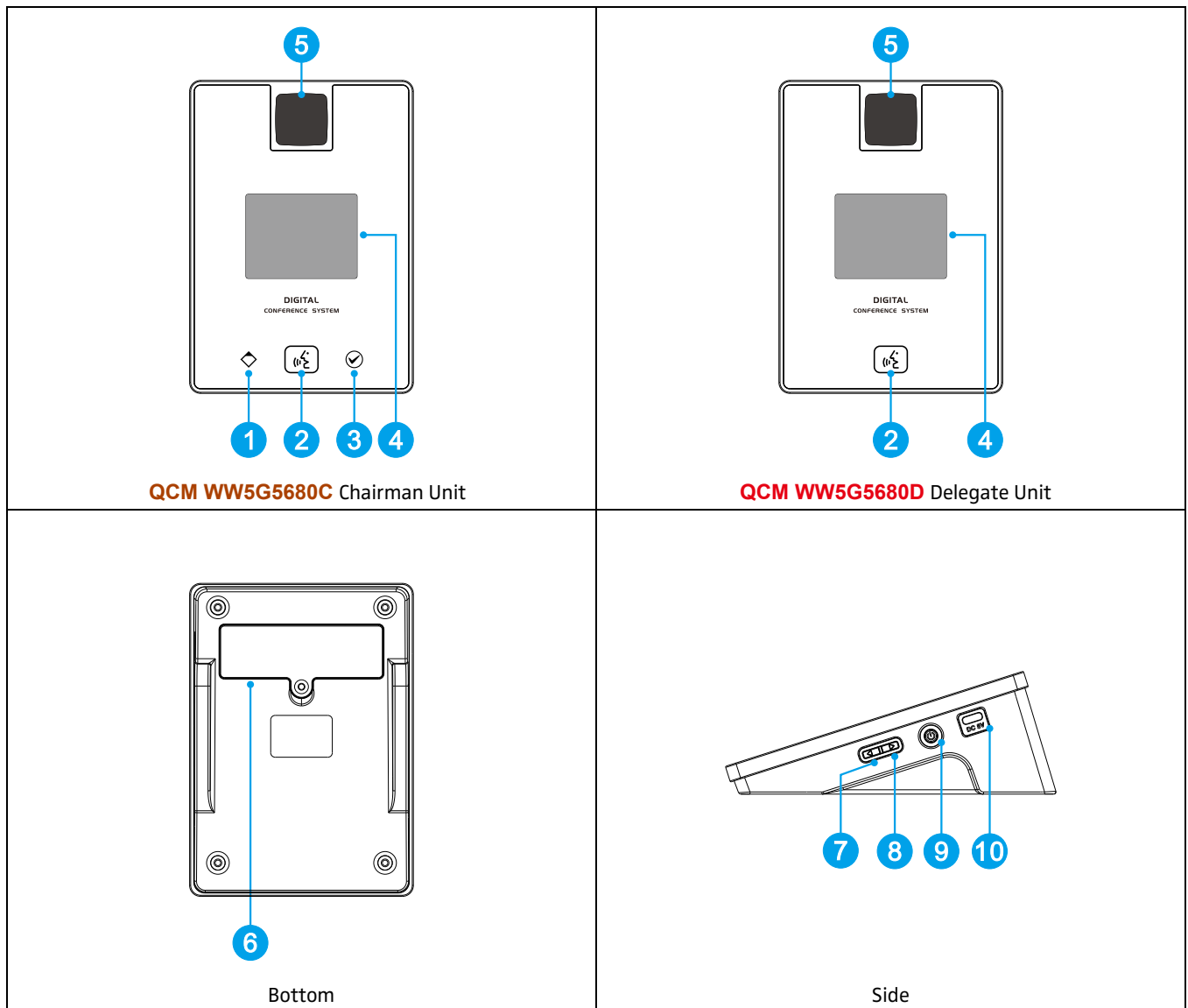


Figure 3.0 Countertop unit

## 3.2 Countertop units

### 3.2.1.1 Front

#### 1. Priority key (chairman unit)

- All active delegate microphones will be turned off when this key is pressed;

#### 2. Microphone On/Off key with indicating light (for the chairman unit)

Microphone On/Off/request key with indicating light (for the delegate unit):

- Chairman unit: press this key to activate/deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak. ;

#### 3. Chairman approve speech button

#### 4. High brightness 320×240 IPS TFT display

- Multilingual (Simplified Chinese, English) menus can be displayed online.

#### 5. When using a square tube, it is a fixed square microphone tube interface (non detachable)

When using a gooseneck microphone tube, it is a detachable microphone tube spiral movable interface

### 3.2.1.2 Bottom

#### 6. Battery compartment: Fill 1 18650 rechargeable lithium battery.

Warning: Do not install the battery with incorrect polarity, as this may damage internal electronic components.

### 3.2.1.3 Side

#### 7. Microphone volume reduction: Pressing this button will reduce the speaking volume, with a minimum volume of 1.

#### 8. Microphone volume increase: Pressing this button will increase the speaking volume, with a maximum volume of 6.

#### 9. Microphone power on key: Press for 1 second to turn on the power to the transmitter. Press continuously for 3 seconds to disconnect the power supply to the transmitter.

#### 10. TYPE-C charging interface

# Chapter 4 System Connection

## 4.1 Summary

The Digital wired & wireless dual transmission conference system has a simple and reasonable structure, and the installation of the system is simple and fast. The wireless unit adopts 5G transmission, and the wired units are connected to the conference system controller through a "hand in hand" connection method through a dedicated extension cable.

This chapter mainly introduces the connection of the conference system in detail through charts and examples.

### 4.1.1 Connection principles

The conference system controller is the core equipment of the digital conference system, which provides communication and audio transmission for the conference unit, and is also a bridge for connecting and controlling the system hardware and system application software.

The wireless unit is powered by its built-in 18650 high capacity lithium battery, with an ultra-low power circuit design. It has a continuous speaking time of 8 hours and a standby time of 12 hours. With a TYPE-C interface, which can be used while charging.

The wired conference unit is powered by the conference system controller, so the number of conference units that the controller can connect to is limited by the power supply capacity. Each conference system controller has a set of 2-way RJ45 microphone unit interfaces, using a closed-loop Ethernet link mode, supporting dual power supply for wired microphone units, and supporting 20 units with network cable interfaces.

The conference system controller can run independently and achieve basic conference control functions; Combined with system software, it can achieve more management and control functions.

### 4.1.2 Transmission of wireless conference units

This series of wireless conference units adopts 5G signal transmission, and the entire system must be set on the same data channel, and different ID need to be set between units in order for the system to function properly.

## 4.2 Connection between the controller and the conference unit

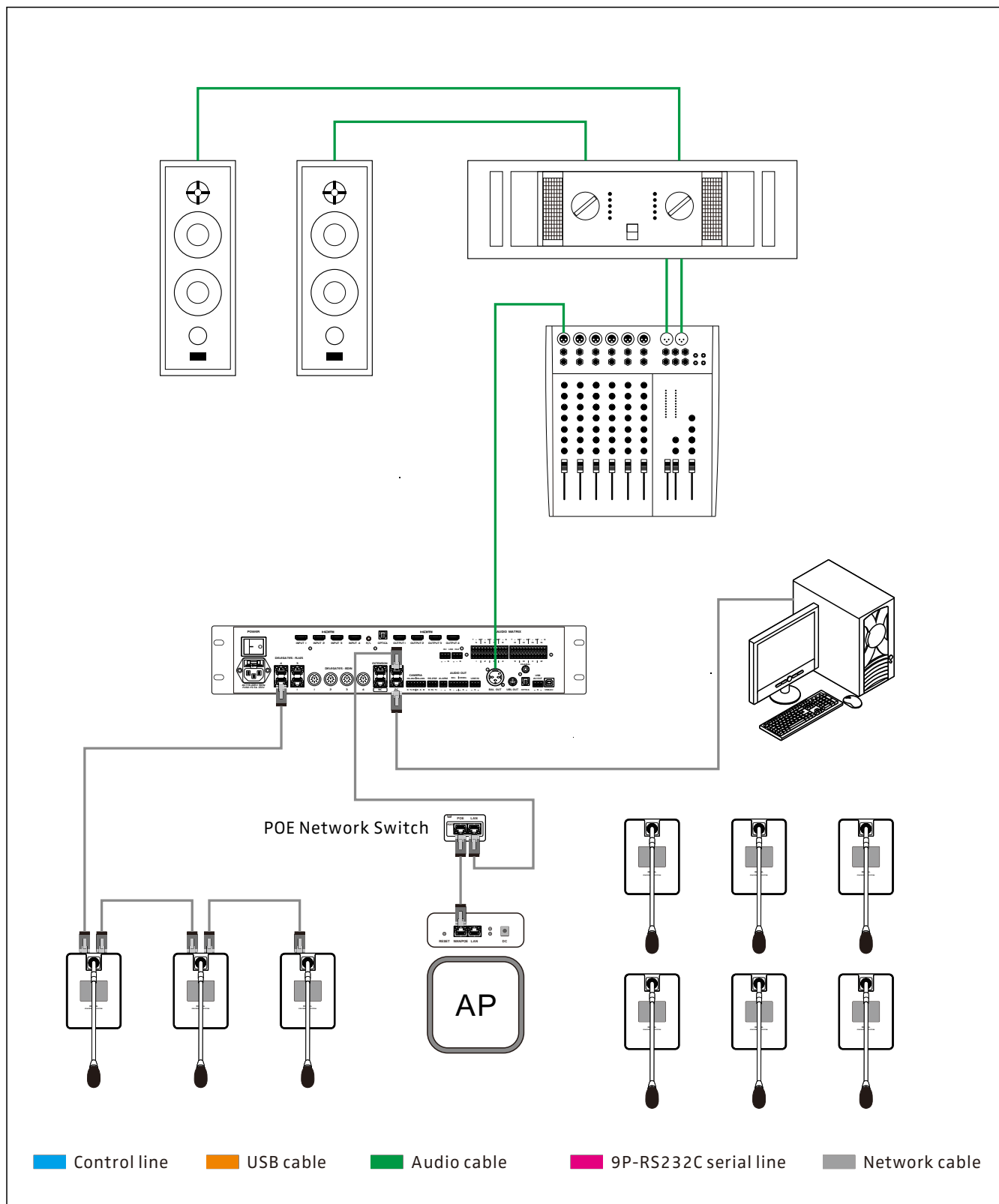


Figure 5.1 Connection between the controller and the conference unit

4.3 Connection with camera

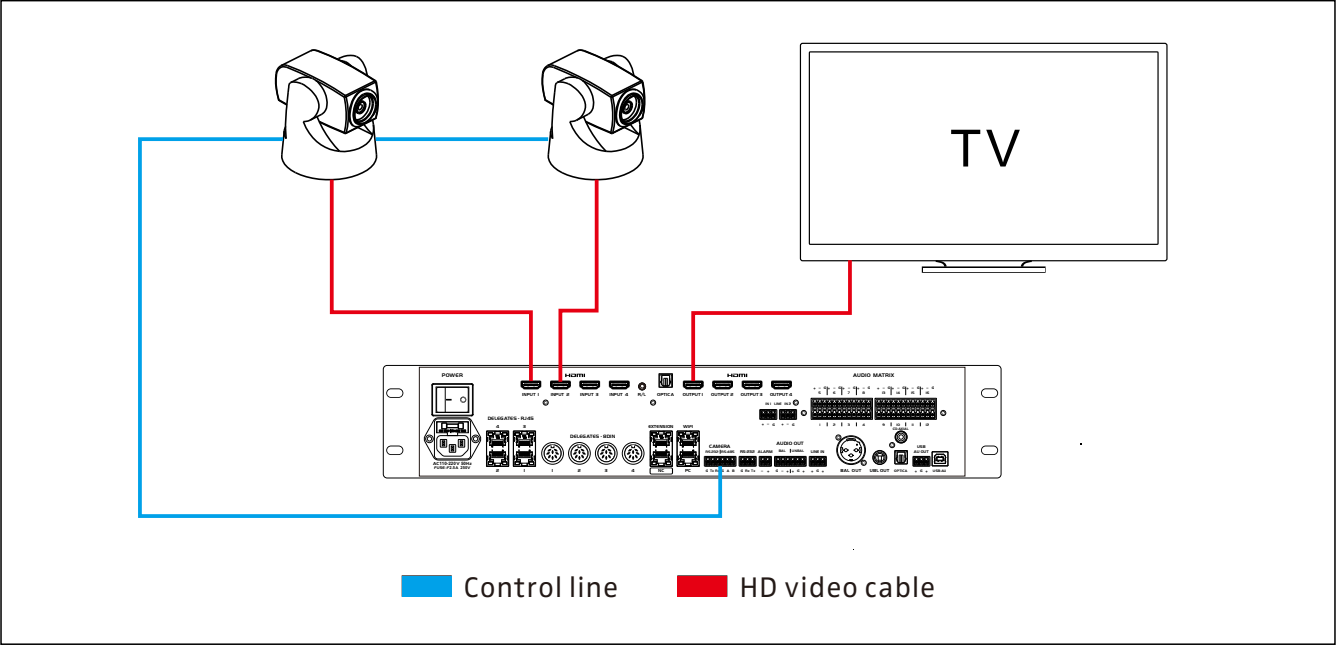


Figure 5.2 Connection with camera

Connection method	Drawing
232	<div><div><p>Controller</p><p>RS-232   RS-485</p><p>G Tx Rx   G A B</p></div><div><p>Camera</p><p>IN OUT</p><p>RS-232C</p></div><p>Wiring: G to G, Tx to IN, Rx to OUT, A to A, B to B.</p></div>
485	<div><div><p>Controller</p><p>RS-232   RS-485</p><p>G Tx Rx   G A B</p></div><div><p>Camera</p><p>RS-485</p><p>G A B</p></div><p>Wiring: G to G, A to A, B to B.</p></div>

Figure 5.3 Communication connection between the controller and the camera

# Chapter 5 Working environment and maintenance

Suitable working environment and proper maintenance methods can extend service life of the equipment effectively. 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 is recommended that the chairman unit and the interpreter units are connected at the beginning of a trunk 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

- 1.Ensure that the area is a dust-free environment.
- 2.Ensure adequate ventilation.
- 3.Ensure adequate lighting. But be sure that the lighting does not impede the operator in the control room and the normal system operation.
- 4.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.
- 5.To avoid the risk of shock or permanent damage to the system units, do not expose units to rain or moisture.
- 6.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 service center in your region.
- 7.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 System operator room

In a PC based system, the operator needs a dedicated room to operate the PC and to manage the congress procedure. Generally, the demands on the operator room are the same as on the interpreter booth. By means of a microphone system, the operator should also be connected to a public - address system to remind the participants of operations, such as voting, signing-in, etc.



# Chapter6 Technical specifications

## 6.1 System specifications

### **System performance**

Conforms to IEC 60914, the international standard for congress systems

### **System environmental conditions**

**Working conditions:** fixed/stationary/transportable

**Temperature range:**

-Transport: -40 °C to +70 °C

-Operating: 0 °C to +45 °C

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

**Safety:** Compliant to EN 60065

**EMC emission:** Compliant with EN 55022

**EMC immunity:** Compliant with EN 55024

**EMC approvals:** CE, FCC

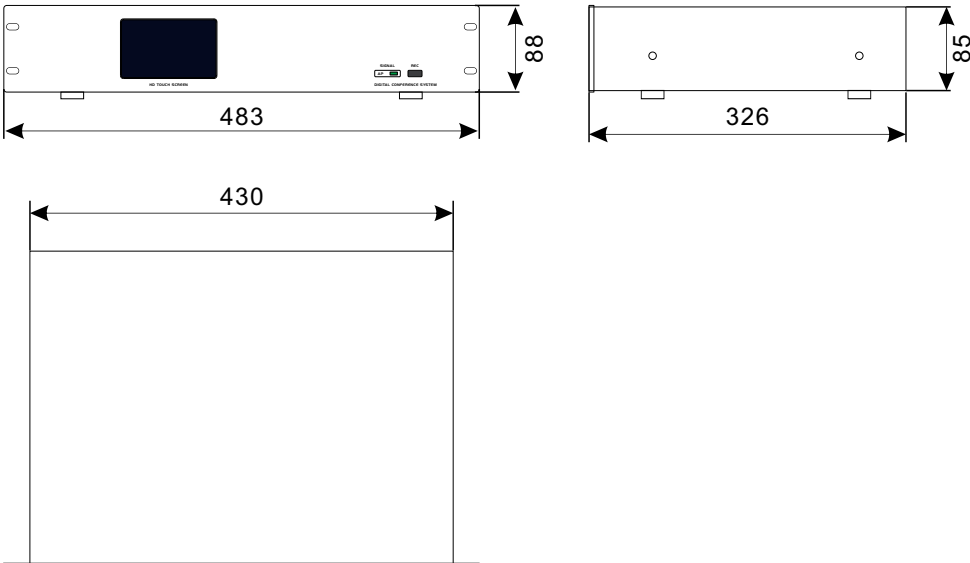
**Power harmonic:** Compliant with EN 61000-3-2

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

6.2 Conference system controller

6.2.1 System Controller

6.2.1.1 Physical characteristics

Controller		
Installation	Tabletop / standard 19-inch rackmount	
Dimensions (mm)	 <p>The technical drawing illustrates the physical dimensions of the conference system controller. It includes three views: a top view for tabletop installation showing a width of 483 mm and a height of 88 mm; a side view for rackmount installation showing a depth of 326 mm and a height of 85 mm; and a front view showing a width of 430 mm. The device is depicted as a black rectangular unit with a control panel on the top surface.</p>	
Color	Black	
Weight	5.5kg	

## 6.2.1 System Controller

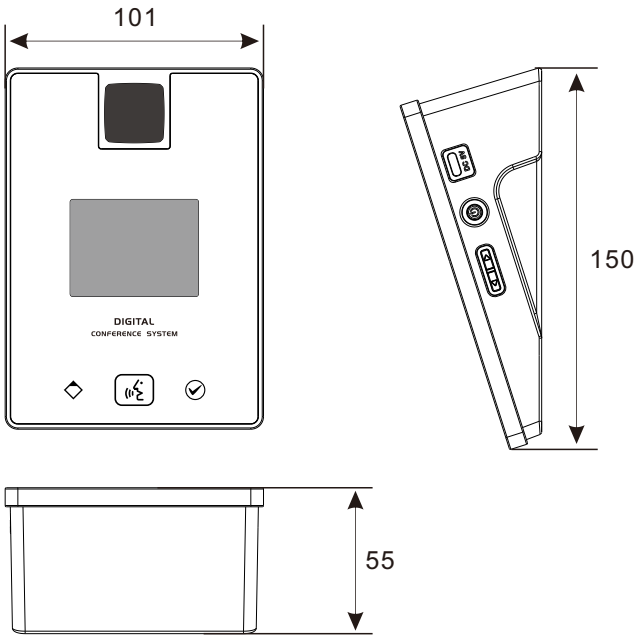
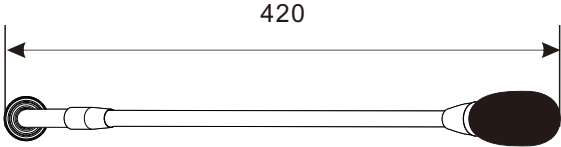
### 6.2.1.2 Electrical characteristics

Controller	
Power supply	AC110V-220V/50Hz
Frequency response	50Hz-18kHz
S/N ratio	>80dBA
T.H.D	<0.05%
Dynamic	>80dBA
Units capacity	Wired Units $\leq$ 5300 ; Wireless Units $\leq$ 300
Interpretation channel	63+1 CH
Display	4.3 IPS TFT
Recording connector	USB x1
Input connector	RJ 45 x4, DIN-8 x4
Extension interface	RJ 45 x1
Digital audio interface	Dante x1 (Optional)
AP interface	RJ 45 x1
PC interface	RJ 45 x1
Camera control connector	6P connector x1
Central controller connector	3P connector x1
Alarm interface	2P connector x1
Audio output	3P connector(bal) x1, 2P connector(unbal) x2, XLR(bal) x1 6.35mm(unbal) x1, Coaxial x1, Optical fiber x1 Sound card: 2P connector(unbal) x2 Audio matrix: 3P connector(bal) x16(Optional)
Audio input	3P connector(unbal) x2, 2P connector(unbal) x2
Sound card	USB x1
Video connector	HDMI 4X4(Optional)

## 6.3 Conference System Unit

### 6.3.1 Countertop conference unit

#### 6.3.1.1 Physical characteristics

Conference unit	
Installation	Countertop
Dimensions (mm)	
Gooseneck (mm)	
Color	Base: Black, Microphone: Black
Weight	Base: 0.68 kg Gooseneck microphone : 0.07kg

### 6.3.1 Countertop conference unit

#### 6.3.1.2 Electrical characteristics

Conference unit	
Working Voltage	DC 3.7V -- 4.5V
Consumption Rating	Maximum: $\leq 1.5W$
Carrier frequency band	<b>5150-5350, 5650-5850 Mhz</b>
Capsule	Cardioid
Sensitivity	$-40 \pm 1.5dB$ (0dB=1V/Pa, at 1KHz)
Frequency response	50Hz-18kHz
Input impedance	1 k $\Omega$
SPL	100dB(THD>3%)
S/N ratio	>80dBA
Crosstalk	>70dBA
Dynamic	>80dBA
T.H.D	<0.05%
Display	2.4-inch 320*240 IPS TFT
Operating time	8-10 hours
Operating temperature range	-9°C -- 40°C

