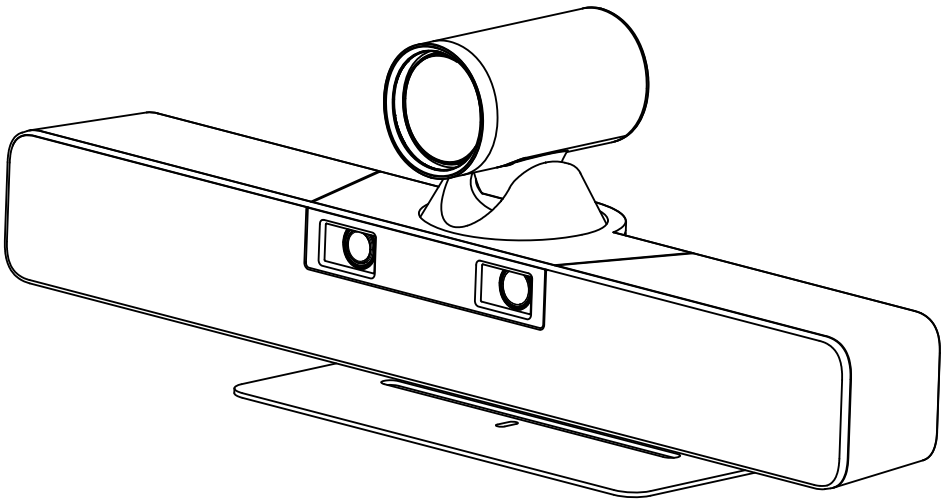


4K UHD Integrated Dual-Lens USB Camera



User Manual

Limitation of Liability

This manual does not contain any warranties or implied warranties of any kind. The contents of this manual may be updated at any time without notice.



Operating this equipment in a residential environment may cause radio interference.

FCC & IC Statement



This device complies with Part 15 of the FCC Rules. The operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used by the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1) This device may not cause interference.
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) L' appareil ne doit pas produire de brouillage;
- 2) L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale, but the following warning shall be included in the instructions for use:

European Community Compliance Statement (Class A)



This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2014/30/EU.

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1 Safety Precautions

- During the installation and operation, all electrical safety regulations of the country and region of use must be strictly observed.
- Please use the 12V 5A power adapter that comes standard with this product.
- Do not connect multiple devices to the same power adapter (exceeding the capacity of the adapter may generate excessive heat or cause fire).
- Do not rotate the camera by hand, otherwise it may cause mechanical failure.
- When installing this product on a wall or ceiling, make sure the device is secure and there are no obstacles within the rotation range. Do not power on until all installations are completed.
- To avoid heat build-up, please keep smooth ventilation around the device.
- If the device smokes, smells, or makes noises, please turn off the power and unplug the power cord immediately, then contact the dealer in time.
- This device is not waterproof, please keep the device dry.
- This product has no user-serviceable parts, damage caused by the user's disassembly is not covered by the warranty.



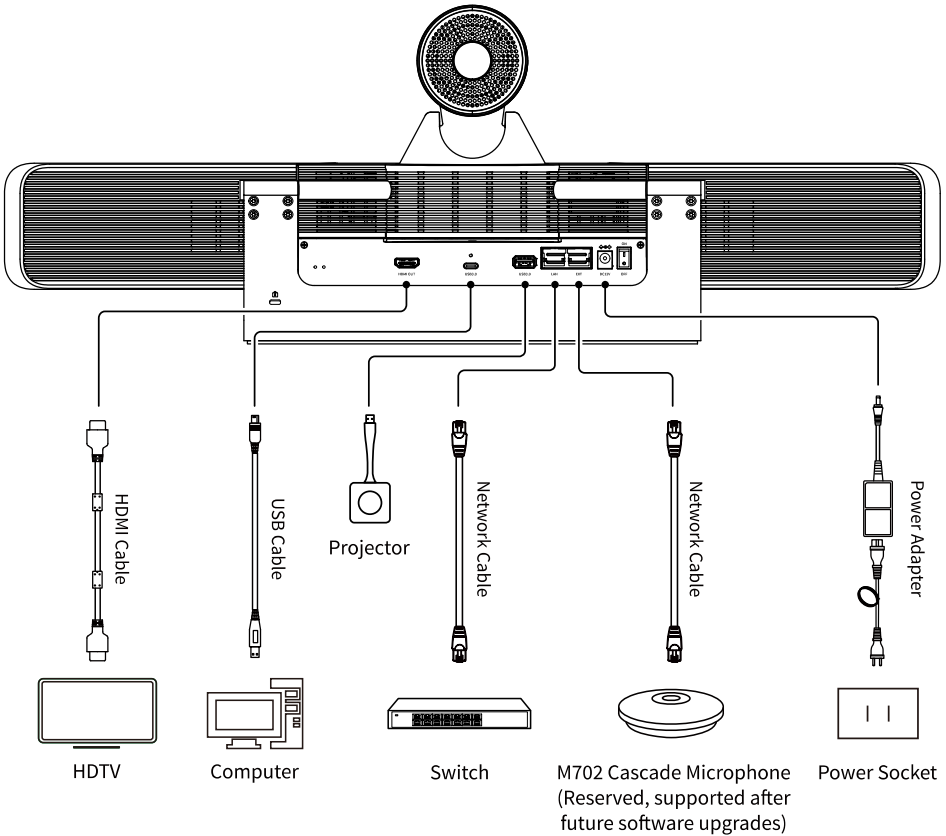
Running this device in a residential environment may cause radio interference.

2 Packing List

Name	Quantity
Camera	1
Power Adapter	1
Remote Control	1
Wall Mount Bracket (with screws)	1
USB Cable	1
User Manual QR Code	1

3 Connection

The cable connection contains optional configurations and for reference only. Please connect the cables according to actual needs.



 **Note**

The recommended horizontal cascade distance is 3 meters, and the maximum number of cascades is 3 (Reserved, supported after future software upgrades).

Projector Pairing:

Insert the BY40 wireless BYOD projector into the USB 3.0 Type-A interface of the camera, the blue indicator on the projector will turn on, after approximately 10 seconds, the indicator will change to red to indicate that the projector is paired. Remove the projector and connect it to a PC to enable the BYOM & BYOD functions.

4 About Product

4.1 Features

- **Binocular Collaborative Design**

Featuring a new binocular collaborative design with a 120° 4K fixed-focus wide-angle lens, providing a stable panoramic detection view. Includes a 12x 4K optical zoom lens, ensuring clear, detailed close-up images.

- **High Integration and All-in-one Design**

Integrated with a 4K ultra-high-definition close-up camera, a 4K panoramic high-definition camera, beamforming microphone, and full-range speaker in a three-in-one design, reducing wiring and making video communication effortless.

- **4K UHD**

Using 1/2.5-inch high-quality UHD CMOS sensor with 851M ultra-high pixel resolution enables high quality images of 4K (3840x2160), and backward compatible with 1080P, 720P and other resolutions to meet the needs of various video experience.

- **71° Wide-angle Lens + 12X Optical Zoom**

Using a high-quality 4K ultra-high-definition lens with maximum horizontal field of view of 71°. Supports 12X optical zoom, ensuring clear, high-definition images even when zoomed in on close-up shots, providing an exceptional visual experience.

- **Close-up Camera with Motorized Pan-Tilt Mechanism**

Built-in a proprietary motorized pan-tilt mechanism with a horizontal rotation range of up to $\pm 90^\circ$ and vertical rotation range from -23° to 23° .

- **Ultra-wide-angle Panoramic Detection**

120° 4K ultra-wide-angle panoramic camera provides expansive field of view detection. Optional wall mount and TV mount brackets offer flexible installation in various settings.

- **Beamforming Microphone**

Built-in 6 beamforming microphones (BF), low-distortion lateral beamforming algorithm directs

the microphone directly towards the speaker, better sound and enhancing communication clarity, richness, and realism. Supports cascading extended microphones for wider coverage of harmony distance.

- **Audio 3A Algorithm**

Built-in Audio 3A algorithm (AEC/AGC/ANS), full-duplex conversation and meeting the communication needs in different room structures, providing comfortable and clear communication whether seated at the conference table, next to it or standing.

- **Full-Range Speaker**

Full-range high-fidelity speaker with professional acoustic design, reducing sound interference and providing exceptional sound effects.

- **Auto Framing**

Built-in intelligent automatic framing AI algorithm, combined with facial recognition, adjust the camera automatically to achieve the best composition as the number of seats in the meeting room changes.

- **Speaker Tracking**

Built-in intelligent analysis and sound source localization algorithms, it can identify and locate sound sources. The system intelligently controls the variable focus lens to automatically track the speaker, switching to the speaker's image seamlessly, ensuring that the speaker is always clearly visible in the frame.

- **Smart Gallery**

Utilizing smart facial recognition AI algorithms, extract and intelligently arrange the close-up images of participants, enabling equal participation in meetings and more realistic face-to-face digital collaboration for remote participants.

- **BYOM & BYOD**

Built-in Wi-Fi module supports wireless access for personal laptops to call video and audio, supports the wireless projection from computers to the device for HDMI local display.

● **Rich Interfaces**

Support multiple interface types including USB 3.0, HDMI, RJ45, etc., the USB3.0 enabling ultra-high-definition audio-video signal transmission.

● **Easy Deployment**

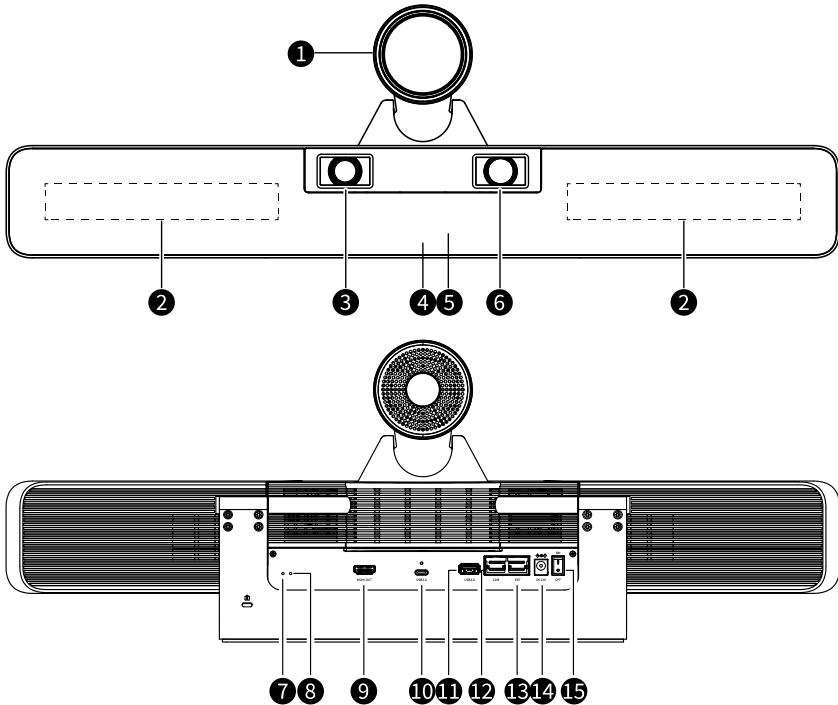
Flexible installation options such as tabletop placement, wall mounting, or attachment to

TVs/displays, making it easier to deploy quickly in crowded meeting rooms.

● **Plug and Play**

Connects to computers or commercial displays with a plug-and-play USB interface for instant use, reducing wiring complexity. Enables easy video communication and lowers user barriers to use.

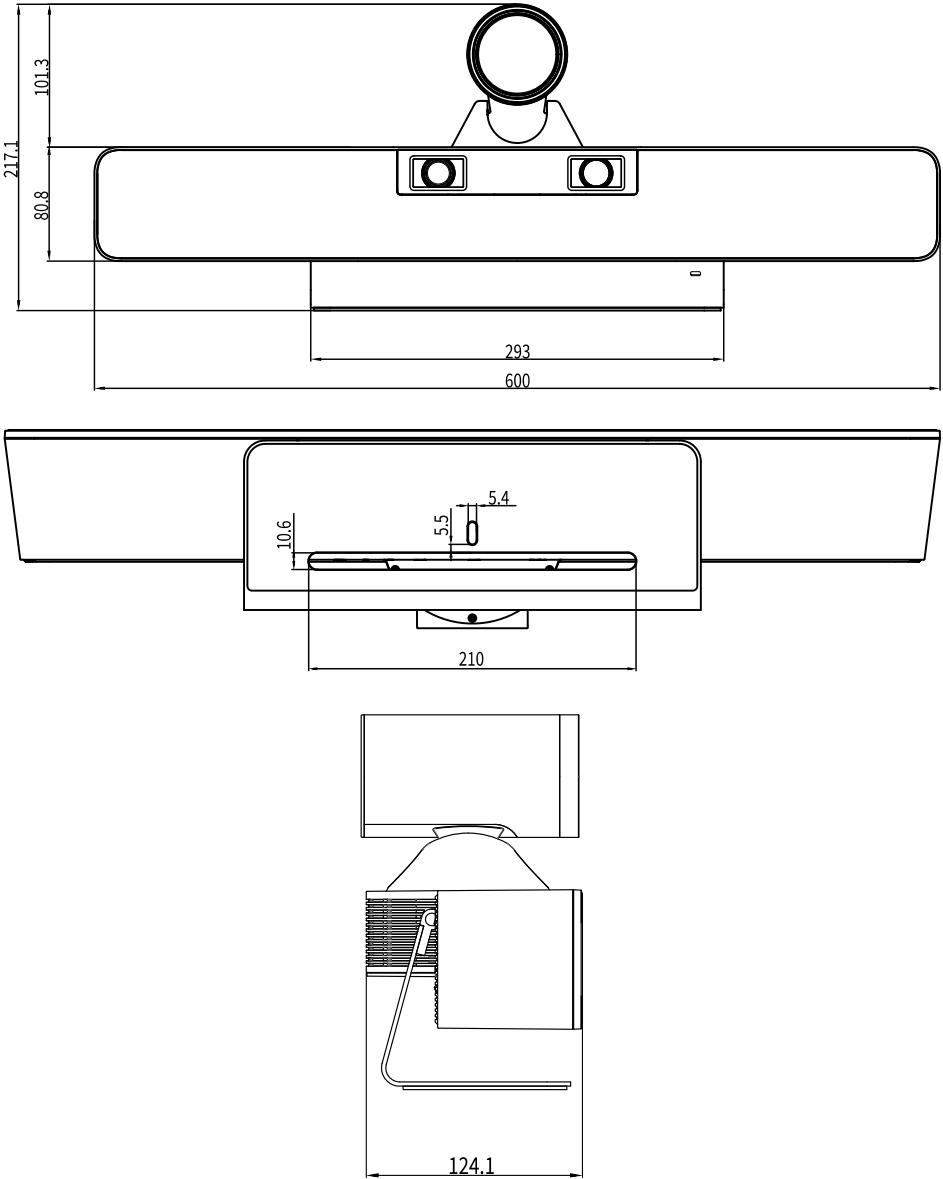
4.2 Appearance



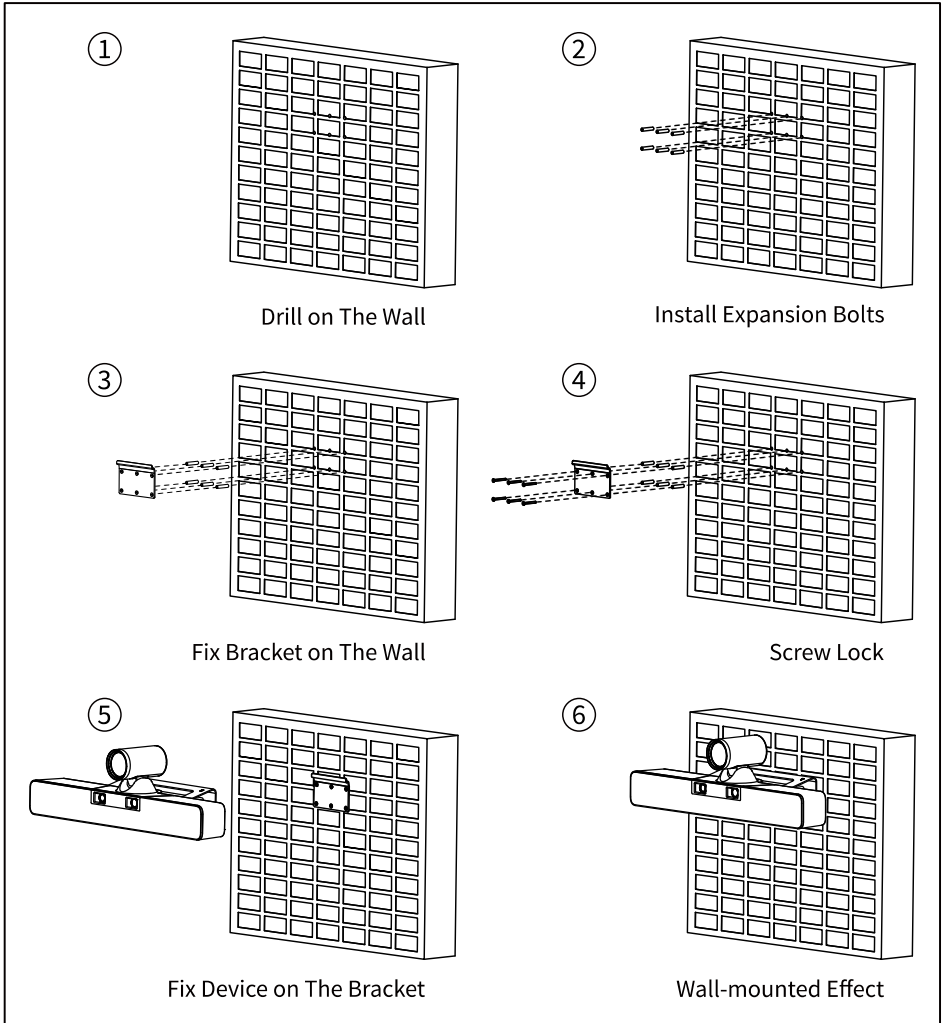
No.	Name	No.	Name
1	Features Lens	9	HDMI OUT Interface
2	Loudspeaker	10	USB 3.0 Type-C Interface
3	Panorama Lens	11	USB 3.0 Type-A Interface
4	Microphone	12	LAN Interface
5	Status Indicator	13	EXT Interface
6	IR Window	14	DC 12V Interface
7	Reset Port	15	ON/OFF Switch
8	Burning Port	-	-

4.3 Dimension

Unit: mm



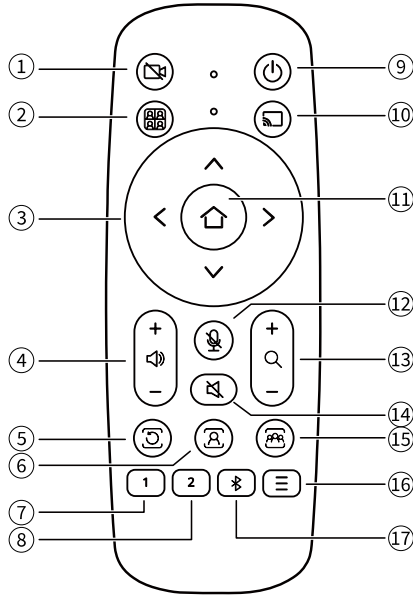
4.4 Wall Mount



Note

The installation diagram is for reference only. Please refer to actual product for the installation accessories.

4.5 Remote Control



Key Description

1. Privacy Cover Switch

- When closing the video: Close the panoramic camera privacy cover and adjust the variable lens to the privacy position.
- When opening the video: Open the panoramic camera privacy cover and return the variable lens to its original position.

2. Smart Gallery Key

Press to turn on the Smart Gallery function

3. Direction Keys

- Menu mode: Press to select and set the Menu
- Non menu mode: Press to move the Camera to Up/Down/Left/Right direction

4. Volume +/- Keys

Press to increase or decrease the volume

5. Exit Key

- Menu mode: Press to return to the previous menu
- Non menu mode: Press to exit the AI mode

6. Speaker Track Key

Press to turn on the Speaker Track function

7. Preset 1 Key

Long press to set preset 1; Short press to call preset 1

8. Preset 2 Key

Long press to set preset 2; Short press to call preset 2

9. Standby Key

Short press to enter/exit the standby mode

10. Wireless Projection Key

Reserved, supported after future software upgrades

11. OK Key

- Menu mode: Confirm selection
- Non menu mode: Press to turn the camera back to the HOME position

12. Microphone Mute Key

Turn On/Off the Microphone

13. Zoom Keys

Zoom in [+]; Zoom out [-]

14. Speaker Mute Key

Turn On/Off the Speaker

15. Auto Frame Key

Press to turn on the Auto Frame function

16. Menu Key

Enter/Exit the OSD menu

17. Bluetooth Key

Reserved, supported after future software upgrades

5 AI Tracking

This camera supports four tracking modes: Person Track, Speaker Track, Auto Frame and Smart Gallery.



Note

The Speaker Track, Auto Frame and Smart Gallery function can be directly turned on or off through the remote control; Alternatively, enter the AI setting menu of the camera to select to turn on/off the AI mode.

5.1 Person Track

➤ Operation

Step 1 After connecting and turn on the camera, press the “Menu” key on the remote control to display the main menu.

Step 2 Move the cursor to select “AI Setting > AI Mode > Person Track”, and then press the “Menu” key on the remote control to enter the Person Track selection interface.

Step 3 Press the “Left/Right” key on the remote control to select the tracked target, the green box will move with the direction keys.

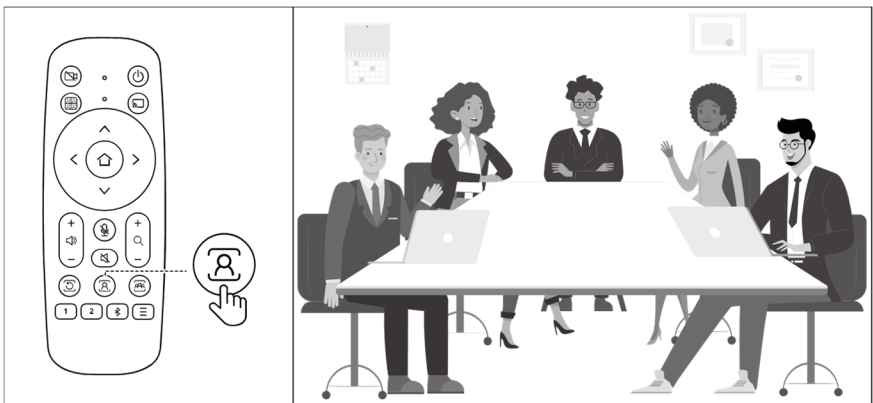
Step 4 Press the “OK” key on the remote control after selecting the tracked target, the green box will disappear, and the camera will then focus on the selected target for real-time tracking.

Step 5 Press the “⏏” on the remote control to disable the Person Track function.

5.2 Speaker Track


➤ Operation

Step 1 After connecting and turn on the camera, press the “🗨️” key on the remote control to enable the Speaker Track function.




Step 2 When the participant speaks, the Camera will automatically lock the Speaker's position and give a close-up image based on the sound source.

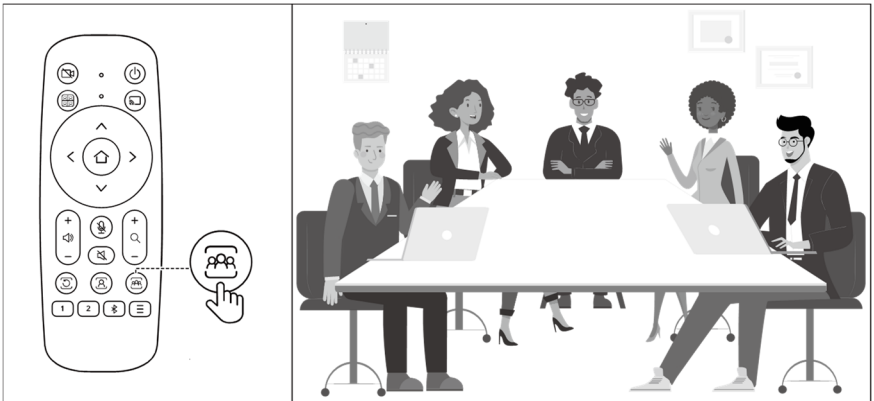


Step 3 Press the “” on the remote control to disable the Speaker Tracking function.

5.3 Auto Frame


➤ Operation

Step 1 After connecting and turn on the camera, press the “” key on the remote control to enable the Auto Frame function.




Step 2 When the participant's position moves, the camera will automatically adjust the image using facial recognition to achieve the best composition.

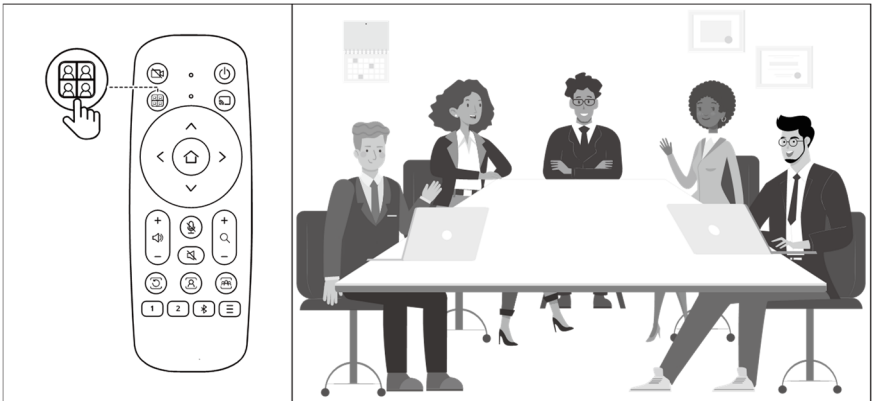


Step 3 Press the “” on the remote control to disable the Auto Frame function.

5.4 Smart Gallery

➤ Operation

Step 1 After connecting and turn on the camera, press the “” key on the remote control to enable the Smart Gallery function.



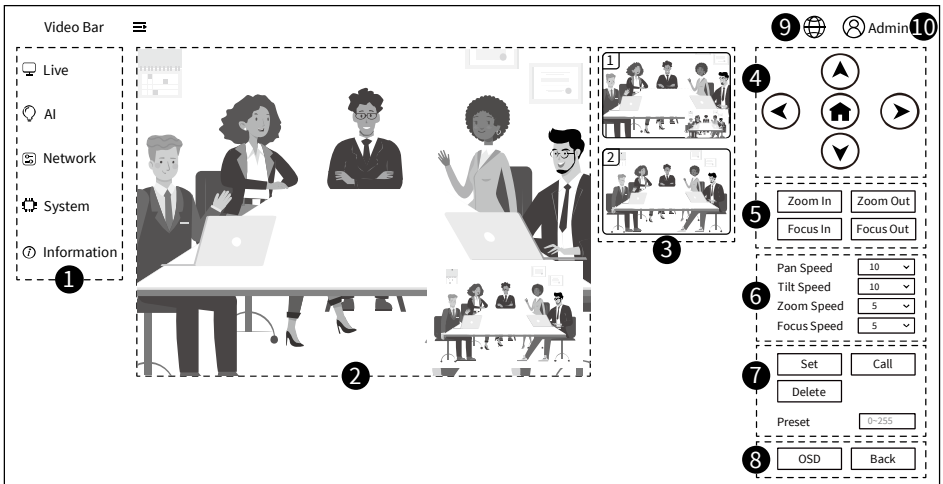
Step 2 The meeting layout adjusts according to the number of participants, the close-up images of participants will be extracted and arranged intelligently (refer to the below diagram for specific layouts).



Step 3 Press the “” on the remote control to disable the Smart Gallery function.

6 WEB Settings

Access the camera’s IP address in the browser (default: 192.168.100.88) to pop up the login window, input the username (default: admin) and password (default: admin) and click the “Submit” to enter the WEB page as below:



1) WEB Configurations

Live: Configure the Exposure, Color, Image and Display parameters.

AI: Configure the AI modes (such as Off, Person Track, Speaker Track, Auto Frame and Smart Gallery) and check the lens calibration.

Network: Configure the LAN and DSE parameters.

System: Support perform the Reboot, Factory Default, Download Log, and modify the username and the password for the WEB login.

Information: Support view device Information and perform System Upgrade.

2) Media Preview Window-Large

- When selecting Media Preview Small Window 1: Display the features lens large screen + panoramic lens small screen zoomed-in image.
- When selecting Media Preview Small Window 2: Display the panoramic lens zoomed-in image.

3) Media Preview Window-Small

- Window 1: Display the features lens large screen + panoramic lens small screen zoomed-out image.
- Window 2: Display the panoramic lens zoomed-out image.

4) Pan and Tilt Control

Use the arrow buttons to turn PTZ to up, down, left and right, click the HOME button to return it to the middle position.

5) Zoom/Focus

“Zoom In” means to zooming in the lens, “Zoom Out” means to zooming out the lens.

“Focus In” means to focus on a nearby object, “Focus Out” means to focus on a distant object.

6) PTZ Speed

The Pan speed value can be set to 1~24, the Tilt speed value can be set to 1~20. After selecting the desired speed value, using the arrow buttons allows for fast or slow movement of the Pan/Tilt. the Zoom and Focus speed value can be set to 1~7, after selecting the desired speed value, using the zoom control area enables fast or slow zoom/focus adjustment of the lens.

7) PTZ Preset

Use the arrow buttons to turn the PTZ to the desired position, enter a preset number (0~255) in the preset box and click "Set" button to save. When the PTZ turn to another position, enter the preset number and click “Call” button to return the PTZ to the preset position.

8) PTZ/OSD

Selecting "OSD" displays the OSD menu in the upper left corner of the media preview window. Use the Up/Down arrow button to navigate through the menu, click “HOME” button to confirm to enter the submenus, and use the Left/Right button to adjust parameters. After making changes, select "PTZ" to save the settings and exit the menu. "Back" button is only effective in menu mode.

When "PTZ" is chosen, use the arrow buttons to control PTZ direction.

9) Language

Click to select “中文” or “English” to change the language of the webpage.

10) Admin

Home: Return to the home webpage.

Logout: Exit to the WEB login page.

7 Troubleshooting

Image

- The monitor shows no image.
 - 1) Ensure that the camera power supply is connected, the voltage is normal, and the power indicator is always on.
 - 2) Turn off the power switch to check that the camera is self-testing.
 - 3) Ensure the cable of the video platform and TV is in the correct connection.
- Image jitters after the camera is connected correctly.
 - 1) Ensure that the camera installation is in a stable position.
 - 2) Check if any vibrating machinery or object is near the camera.
- There is no video image in browser.

IE browser and IE core browser are not supported, the camera video image will be displayed correctly when using Google, Firefox, Edge, etc.

- Unable to access through the browser.
 - 1) Use a PC to connect to the network to test whether the network access is functional. Eliminate network faults that may be caused by cable faults and viruses until the PC and the camera can pass the Ping test.
 - 2) Disconnect the network, connect the camera with the PC separately and reset the PC's IP address if necessary.
 - 3) Ensure that the IP address, subnet mask and gateway settings are correct.
 - 4) Check if the MAC address conflicts.
 - 5) Check if the web port is modified. The default setting is 80.
- Forget the IP address or login password.

The default IP address is: 192.168.100.88; the default username and password are: admin (After changing the password, please log in with the new password).

Control

- Remote control malfunctioning.
 - 1) Check and replace with new batteries.
 - 2) Ensure that the camera working mode is correct..

