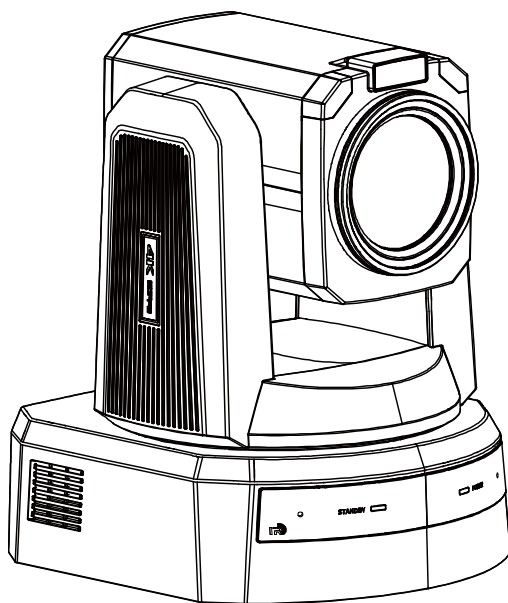




Prestel 4K-PTZ92B20N

4K UHD PTZ 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.

FCC NOTICE (Class A)



This product 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.



Note

This product 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 in accordance with 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 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.



Note

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

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

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:



Warning

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

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 Notes

- During the installation and use of the equipment, all electrical safety regulations of the country and region of use must be strictly observed.
- Please use the power adapter that comes standard with this product.
- Do not rotate head of the camera by hand, otherwise it may cause mechanical failure.
- When installing this product on a wall or ceiling, secure the device securely. When installing, make sure that there are no obstacles within the rotation range of the gimbal; do not turn on the power until all installations are completed.
- To avoid heat build-up, keep ventilation around the device smooth.
- If the device emits smoke, smells, or makes noises, please turn off the power immediately

- and unplug the power cord, and 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 disassembly by the user is not covered by the warranty.



Notice

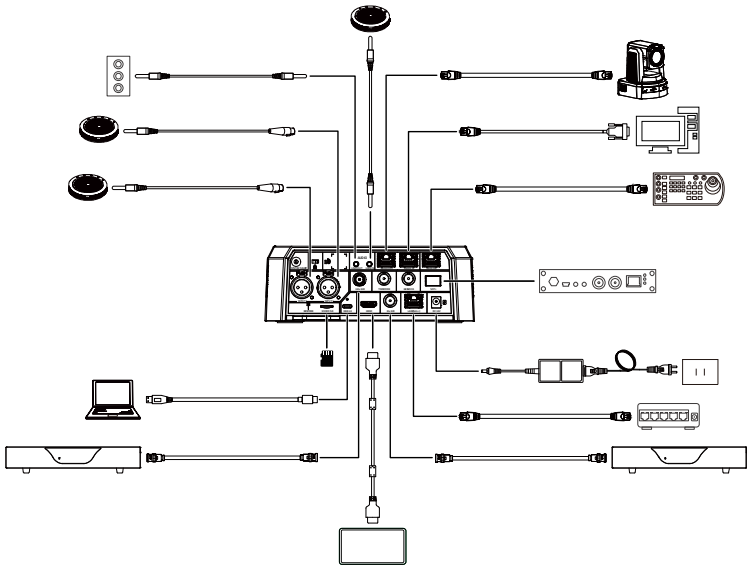
Specific frequencies of electromagnetic field may affect the image of the camera!

2 What's in the Box?

Name	Quantity
Camera	1
Remote Control	1
Power Adapter	1
Power Cable	1
Network Cable	1
User Manual QR Code	1

3 Product Connection

- 1) Please check connections are correct before starting.



Note

The schematic diagram is for reference only. Please refer to the actual application scenario for product connection.

- 2) After powering on the camera, it begins initialization. It first rotates to the lower-left limit position, then moves to the upper-right and lower-left limit positions, and finally returns to the HOME position. The motors stop, and initialization is complete. (Note: If preset position 0 has been saved, the PTZ will rotate to preset position 0.)

4 Video System

HDMI/12G-SDI		3G-SDI	
0	1080P60	0	1080P60
1	1080P50	1	1080P50
2	1080I60	2	1080I60
3	1080I50	3	1080I50
4	1080P30	4	1080P30
5	720P60	5	720P60
6	1080P29.97	6	1080P29.97
7	1080I59.94	7	1080I59.94
8	1080P59.94	8	1080P59.94
9	720P59.94	9	720P59.94
A	4KP29.97	A	1080P29.97
B	4KP59.94	B	1080P59.94
C	4KP25	C	1080P25
D	4KP30	D	1080P30
E	4KP50	E	1080P50
F	4KP60	F	1080P60



Notice

After switching the video system, you need to restart the camera before taking effect!

5 About Product

5.1 Features

- **Extra-large CMOS for Realistic Scene Reproduction**

The new 4/3-inch high-quality UHD CMOS sensor has a larger photosensitive target than most 1/2.5-inch image sensors on the market, enabling 4K (3840x2160) ultra-high-resolution high-quality images with excellent sensitivity and rich natural colors.

- **20x Optical Zoom to Capture Vivid Details**

Equipped with an ultra-high resolution 4K telephoto lens, support 71° horizontal field of

view and 20x optical zoom, breaking distance limitations. Whether capturing the entire view of events or conferences, or focusing on details and exciting moments, camera makes it easy to capture clear, vivid and deep images, with every frame being a blockbuster that dramatically enhances the viewing experience.

- **AI Speaker Tracking liberates the director's hands**

Built-in proprietary ReID (person re-identification) technology, accurately identifies the speaker's body shape, appearance, clothing, and more. As the speaker moves within the conference room, the camera automatically stabilizes and follows, ensuring the speaker remains centered in the frame. Even if multiple people interfere or the speaker moves out of frame and returns, they can be quickly tracked and followed, rivaling the capabilities of professional photographers.

- **Virtual Studio Construction with Real-Time Camera Position Alerts**

Supports FreeD protocol for precise camera positioning data transmission, facilitating easy creation of virtual studios. Equipped with front and rear Tally display lights, allowing live broadcast personnel to easily monitor the real-time status of cameras. Visual cues help coordinate the work of various positions, keeping track of program progress promptly.

- **NDI|HX2 (Optional)**

NDI|HX2 is a new generation of network video transmission method known for its plug-and-play capability, low latency, easy deployment, strong ecosystem, and support simultaneous transmission of audio, video, and control signals.

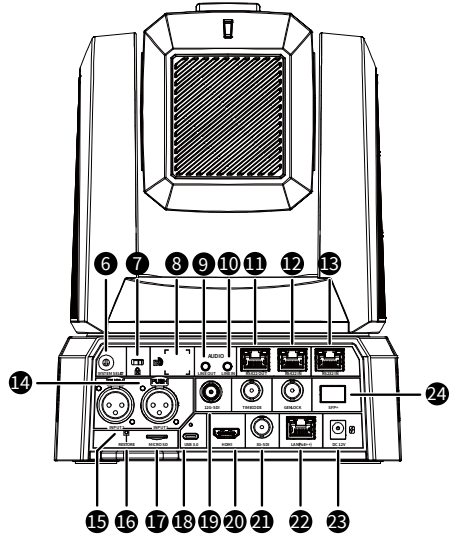
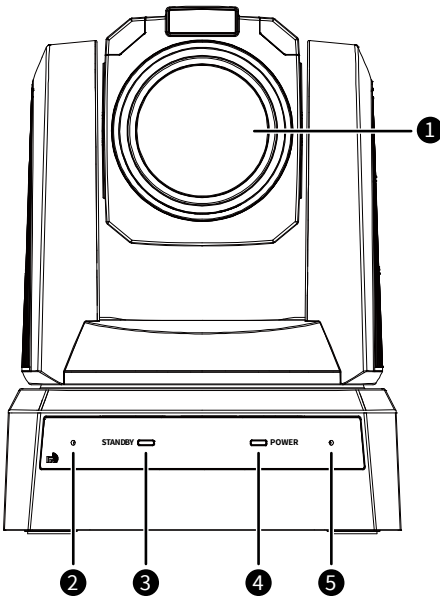
- **Low Illumination**

The new CMOS image sensor with ultra-high signal-to-noise ratio effectively reduces image noise in low-light conditions. The application of 3D noise reduction significantly decreases image noise, ensuring clean and clear images even in low-light condition.

● Multi-Interface Design

Equipped with HDMI, 12G-SDI, 3G-SDI, USB, and network interfaces, capable of simultaneously outputting five channels of high-definition digital signals. Supports multiple control methods including RS232, RS422, network, and USB interfaces for camera control. Enhanced device compatibility makes it suitable for a wide range of applications including virtual studios, large auditorium broadcasts, live exhibitions, and remote teaching scenarios.

5.2 Indicator and Port

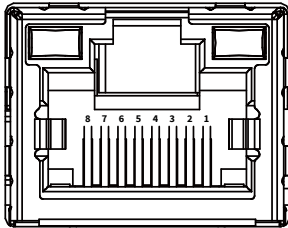


No.	Name
1	Camera Lens
2	Microphone
3	STANDBY Indicator
4	POWER Indicator
5	Microphone
6	System Select Switch
7	Security Lock Slot
8	IR Window
9	LINE OUT Port
10	LINE IN Port
11	RS422 OUT Port
12	RS422 IN Port
13	RS232 IN Port
14	INPUT1 Port
15	INPUT2 Port
16	RESTORE Key
17	MICRO SD Slot
18	USB 3.0 Port
19	12G-SDI Port
20	HDMI Port
21	3G-SDI Port
22	LAN (PoE++) Port
23	DC 12V Port
24	SFP+ Port



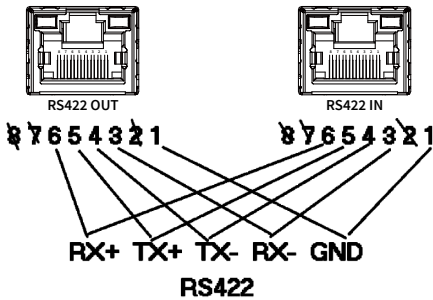
TIME CODE and GENLOCK ports are not enabled.

● RS422 OUT/IN Port

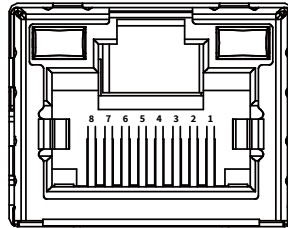


No.	Function	No.	Function
1	GND	5	TX+
2	NC	6	RX+
3	RX-	7	NC
4	TX-	8	NC

Correspondence between RS422 OUT and RS422 IN pins:

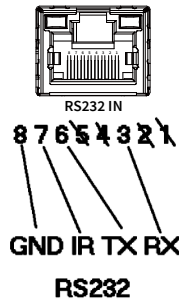


● RS232 IN Port



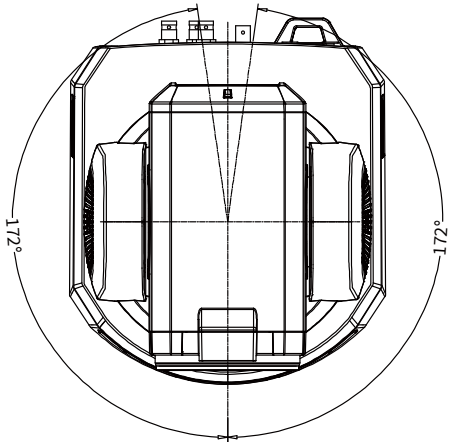
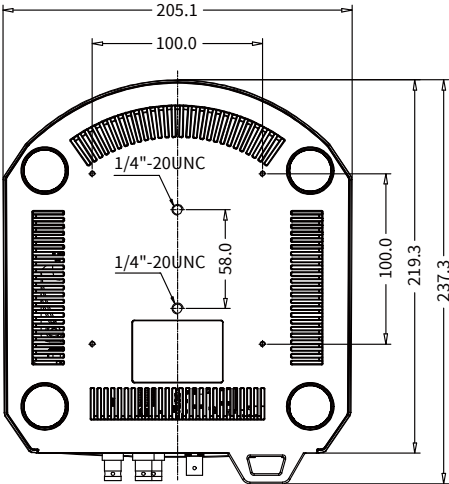
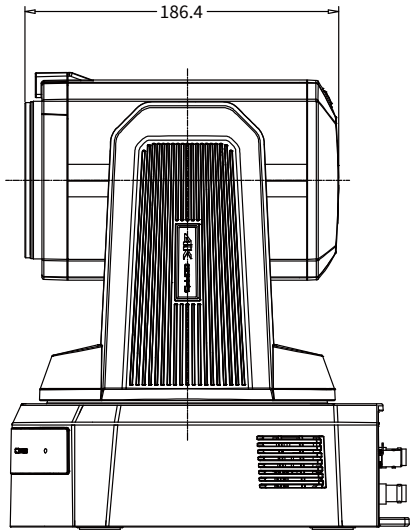
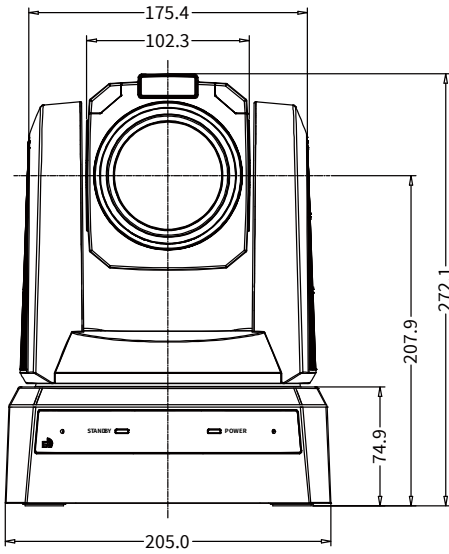
No.	Function	No.	Function
1	NC	5	NC
2	NC	6	TX
3	RX	7	IR
4	NC	8	GND

Correspondence of RS232 IN pins:



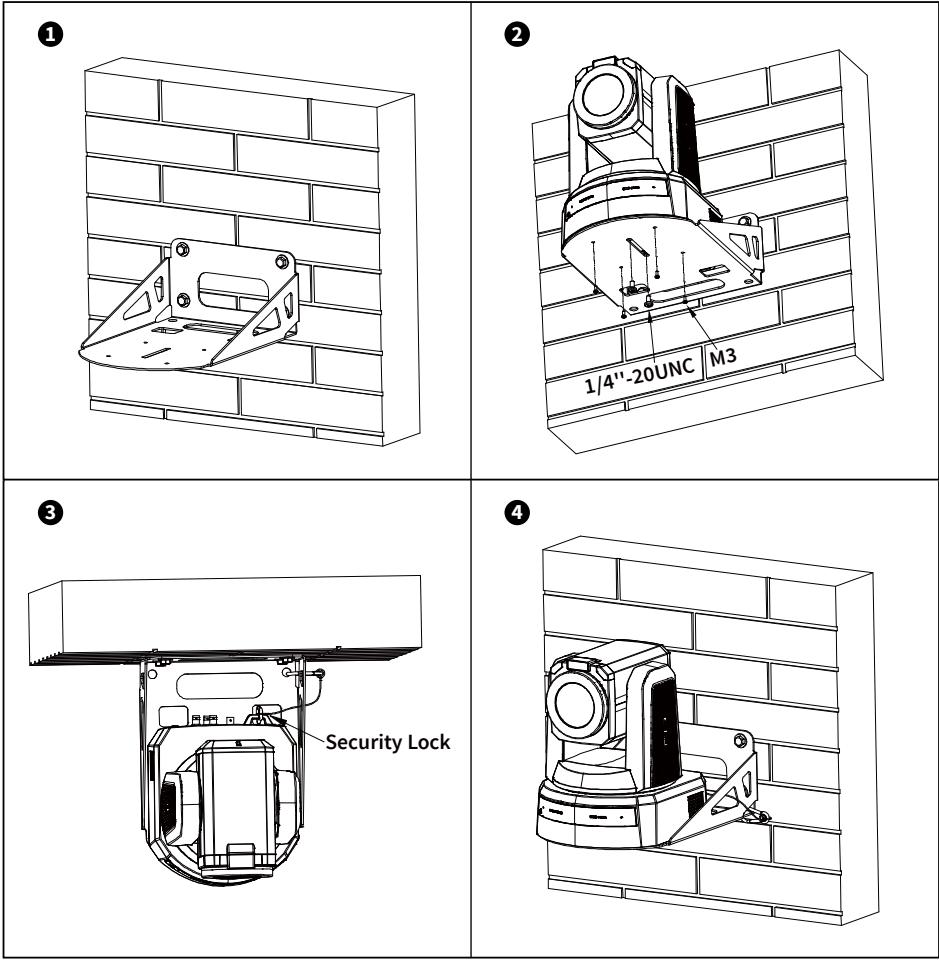
5.3 Dimension

Unit: mm

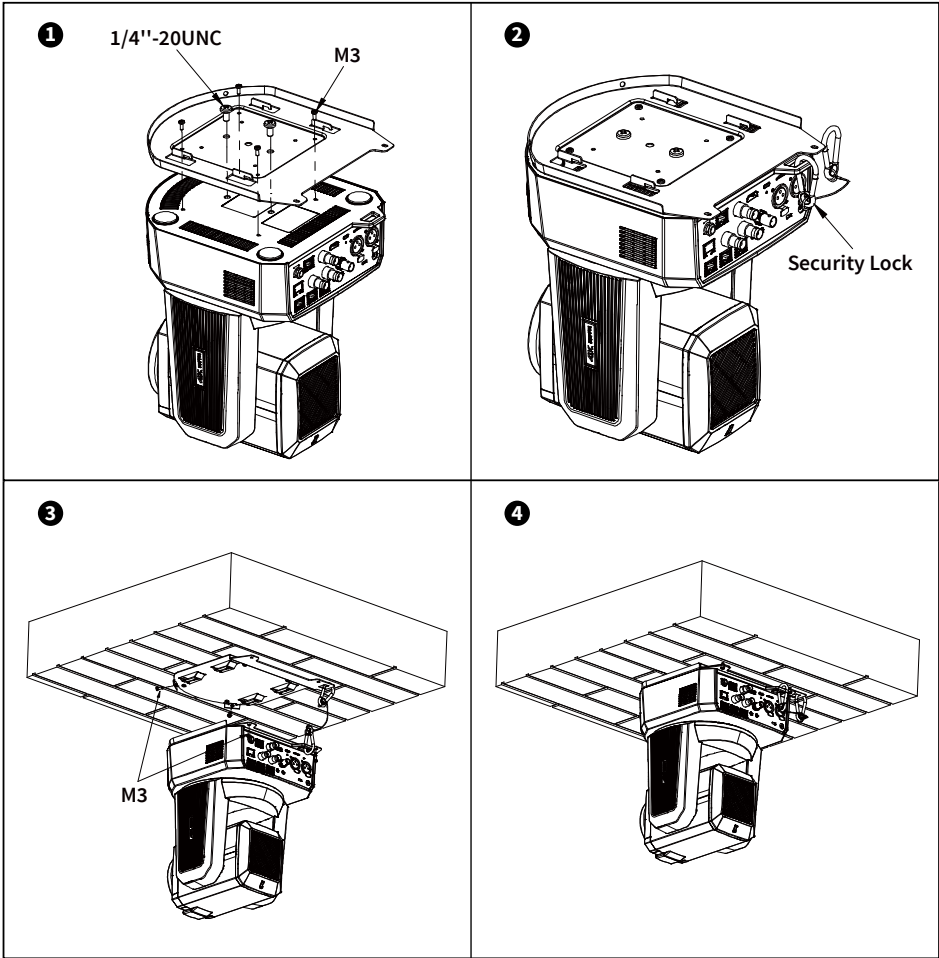


5.4 Installation

5.4.1 Wall Mount



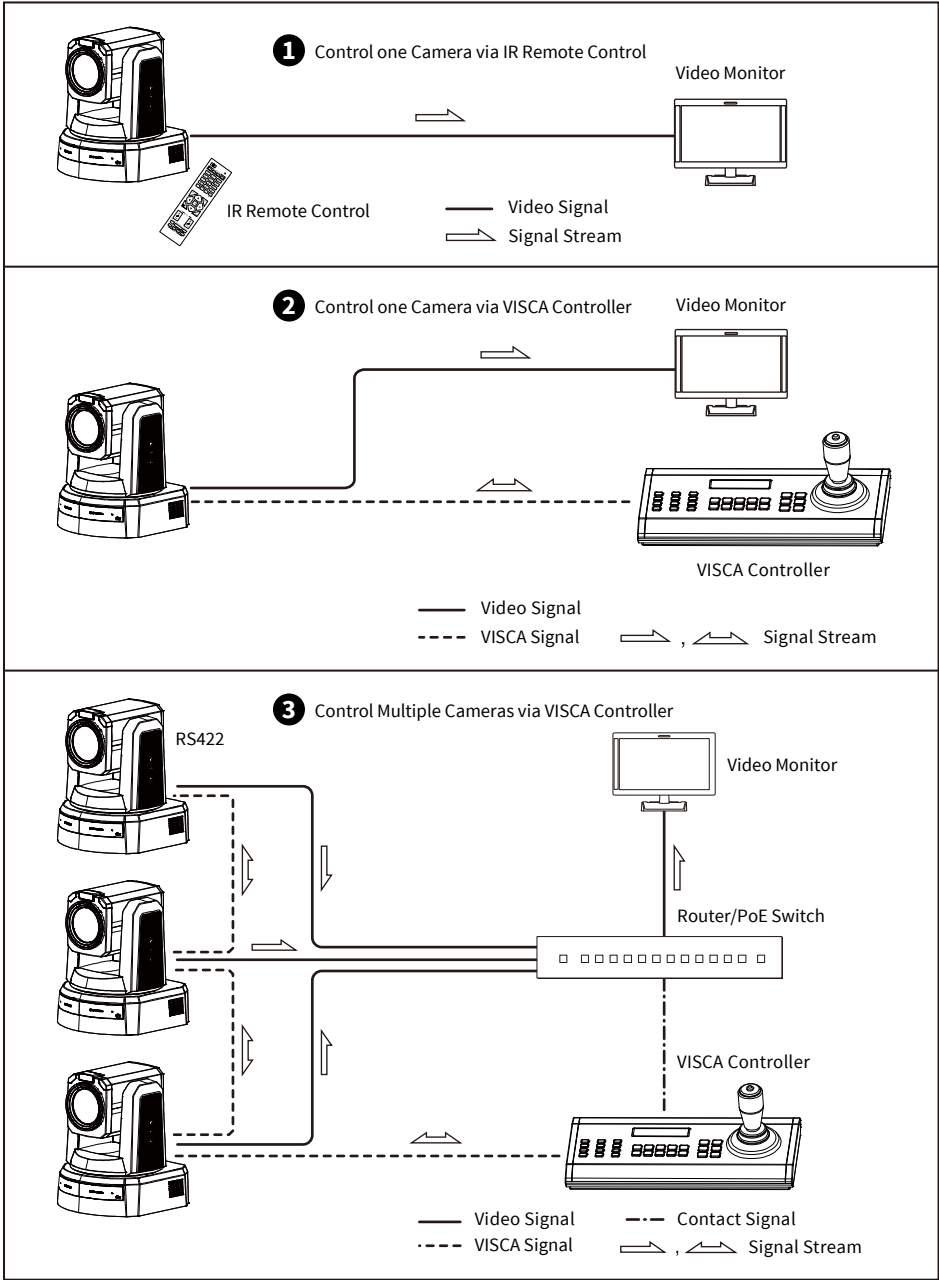
5.4.2 Ceiling Mount



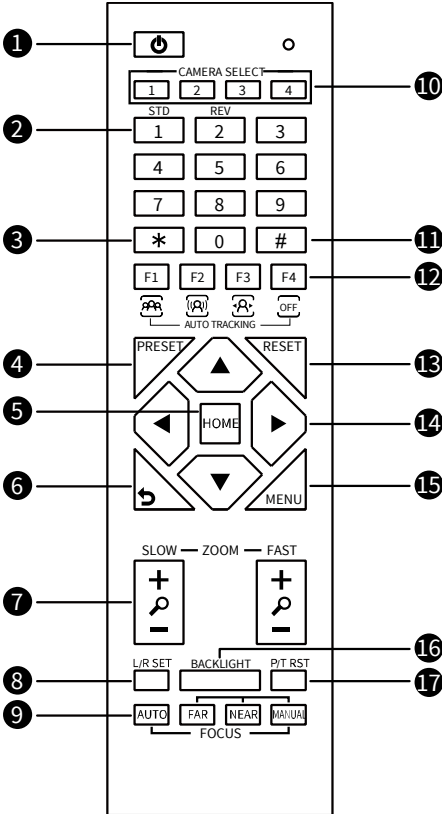
Note

The above installation diagram is for reference only, please refer to actual product for the installation accessories.

5.5 Control Camera



5.6 Remote Control



Key Description

1. ⏻ (Standby) Key

Press to enter standby mode

2. Number Keys

To set preset or call preset

3. * Key

Use with other keys

4. PRESET Key

Set preset: Successively press [PRESET] + Number key (0-9)

5. HOME Key

Confirm selection or press to turn PTZ back to the middle position

6. ↶ (Return) Key

Press to return to the previous menu

7. ZOOM Keys

- SLOW: Zoom In [+] or Zoom Out [-] slowly
- FAST: Zoom In [+] or Zoom Out [-] fast

8. L/R SET Key

- Standard: Simultaneously press [L/R SET] + [1]
- Reverse: Simultaneously press [L/R SET] + [2]

9. FOCUS Keys

Auto/Manual/Far-end/Near-end focus

10. CAMERA SELECT Keys

Press to select and control the camera, successively press [*] + [#] + [F1]/[F2]/[F3]/[F4]: Set address of the camera 1/2/3/4. If you want to control, press 1/2/3/4 in "CAMERA SELECT".

11. # Key

Use with other keys

12. Auto Tracking Keys

[F1]: Disable [F2]: Disable
[F3]: Turn On AI Tracking
[F4]: Turn Off AI Tracking

13. RESET Key

Clear preset position: Successively press [RESET] + Number key (0-9)

14. PTZ Control Keys

PTZ moved according to the arrow indicates

15. MENU Key

Enter OSD menu or back to the previous menu

16. BACKLIGHT Key

Backlight ON/OFF: Press repeatedly to enable or disable the backlight compensation

- Effective only in auto exposure mode
- If there is a light behind the subject, the subject will become dark, press the backlight key to enable the backlight compensation. Press again to disable this function.

17. P/T RST (PTZ Reset) Key

Press to preset Pan/Tilt self-test

Shortcut Set

Successively press [#] + [*] + [F4]:

Enable or disable the Image Freeze

Successively press [*] + [#] + [1]:

OSD menu default English

Successively press [*] + [#] + [3]:

OSD menu default Chinese

Successively press [*] + [#] + [4]:

Display current IP address

Successively press [*] + [#] + [6]:

Quickly recover the default

Successively press [*] + [#] + [8]:

Check the camera version

Successively press [*] + [#] + [9]:

Quickly set up inversion

Successively press [*] + [#] + [MANUAL]:

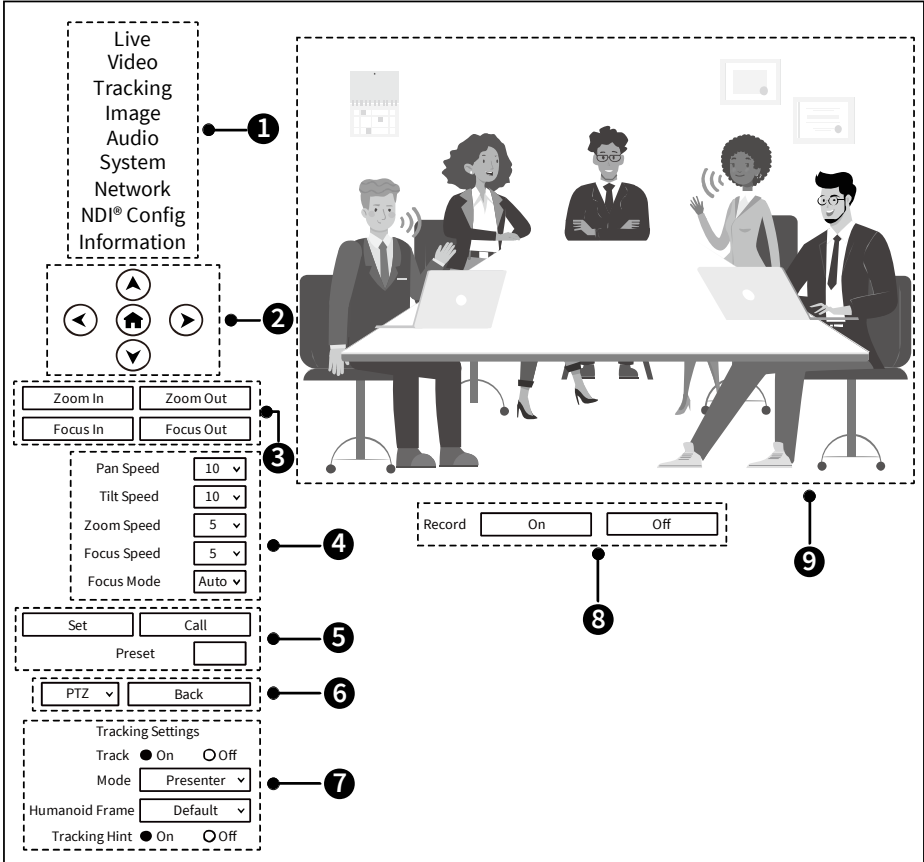
Restore to default IP address and password

Successively press [*] + [#] + [RESET]:

Clear all preset positions

6 WEB Settings

Access the camera IP in the browser (default camera IP: 192.168.100.88) to pop up the login window, then input username (default: admin) and password (default: admin). After login, it will show as below:
(Note: When login the first time, you need to change the initial password. The password must include uppercase and lowercase letters, numbers, special characters, and be at least 9 characters long.)



1) WEB Configuration Items

Live: Preview camera video image.

Video: Set Video Format, Encode Codec, Encode Level, Resolution, Bit Rate, Frame Rate, I Key Frame Interval and Bit Rate Control.

Tracking: Set Presenter, Zone and Auto Frame.

Image: Set Image Exposure, Color, Image, PTZ, Noise Reduction and Style.

Audio: Turn On/Off Audio Switch and ADTS Options. Set Audio Type, Sample Rate, Bit Rate and Input Type.

System: Set Initialize, User, System Upgrade, Record Settings and SD Flash Disk Information.

Network: Set LAN, Port, RTMP(S), SRT, RTSP, ONVIF, Multicast, FreeD, and NTP.

NDI® Config: Set NDI and Active NDI License for Camera.

Information: View camera information.

2) Pan and Tilt Control

Used to control the direction of PTZ rotation (up, down, left, right, HOME position rotation).

3) 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.

4) PTZ Speeds

“Pan Speed” can be selected from 1~24, “Tilt Speed” can be selected from 1~20. After selecting the desired speed values, using the pan/tilt direction keys allows for fast or slow movement of the PTZ.

“Zoom Speed” can be selected from 1~7, “Focus Speed” can be selected from 1~7. After selecting the respective speed, using the zoom control area enables fast or slow zoom/focus adjustment of the lens.

“Focus Mode” can be selected Auto/Manual. When be selected “Manual”, “Focus In” and “Focus Out” then will to take effect.

“Focus Mode” can be selected Auto/Manual. When be selected “Manual”, “Focus In” and “Focus Out” then will to take effect.

5) PTZ Presets

When the PTZ turns to the position that you would like to return to later, you can set presets for quick recall. Type a number (0~254) into the preset box and click “Set” button to save.

When the PTZ turn to other position, input the preset number and click “Call” button to turn the PTZ back to the preset position.

6) PTZ/OSD

When “Menu” is selected, the image preview page enters menu mode, and the OSD menu is displayed in the top left corner of the image preview page. You can use the up and down selection keys in the PTZ direction control area to navigate through the menu. Pressing the HOME key enters a submenu, and the left and right keys modify the submenu. After making modifications in the menu, select “PTZ” in the PTZ/menu selection area to automatically save the settings and exit the menu. The “Back” is only valid in submenu mode and is not effective in PTZ mode or main menu mode.

When “PTZ” is selected, the system enters PTZ mode. The up and down selection keys in the PTZ direction control area control the camera's pan and tilt movements. OSD menu control is not available in PTZ mode and must be controlled using a remote controller for effective operation.

7) Tracking Settings

Turn On/Off the Track or Tracking hint. Set Tracking Mode and Humanoid frame.

8) Record

Turn On/Off video record.

9) Media Preview Window

Preview camera video image.

7 AI Tracking

7.1 WEB Control

● Speaker (Presenter)/Human Tracking

By modifying web interface parameters, different close-up ratios can be obtained, and tracking can be set on/off, so as to display areas and character positions. If necessary, you can also choose whether to display tracking related prompt information.

Operation Steps:

Step 1 Entering the camera IP address (192.168.100.88) in the browser prompts a login interface.

Input the username and password to access the camera WEB interface.

http://192.168.100.88

Step 2 Enter the “Tracking” option, select speaker mode “Presenter”, and set the tracking parameters in the “Track Off” state.

Tracking Mode: Speaker (Presenter)/Area (Zone)/Auto Frame.

Tracking Settings

Track

☒ On ☐ Off

Mode

Presenter ▾

Humanoid Frame

Default ▾

Tracking Hint

☒ On ☐ Off

Live

Video

Tracking 1

Image

Audio

System

Network

NDI® Config

Information

⬅

⬆

⬇

⬅

Zoom In

Zoom Out

Focus In

Focus Out

Pan Speed 10 ▾

Tilt Speed 10 ▾

Zoom Speed 5 ▾

Focus Speed 5 ▾

Focus Mode Auto ▾

Set

Call

Preset

PTZ ▾

Back

2

Track ☒ On ☐ Off

Mode ▾

Humanoid frame ▾

Tracking hint ☒ On ☐ Off

3

Presenter

Zone

Auto Frame

☒ Auto Zoom ☐ Auto Tilt

When Auto Zoom or Tilt is off, camera drops following object or filling automatically (determine the zoom size and tilt position based on the tracking point position you chosen)

Target Retention Time 0

Figure Size

☐ Full ☐ Half Body ☐ Close Up ☒ Custom

141

Tracking Start Position

Current Location ▾

Character Position

☐ Left ☒ Middle ☐ Right

⌂

⬅

⬆

⬇

⬅

Zoom In

Zoom Out

Focus In

Focus Out

Pan Speed 10 ▾

Tilt Speed 10 ▾

Zoom Speed 5 ▾

Focus Speed 5 ▾

Focus Mode Auto ▾

Set

Call

Preset

PTZ ▾

Back

2

Track ☒ On ☐ Off

Mode ▾

Humanoid frame ▾

Tracking hint ☒ On ☐ Off

Step 3 Set the Target Retention Time, the default value is 6 seconds.

Zoom Speed

5

Focus Speed

5

Focus Mode

Auto

Set

Call

PTZ

Back

Tracking Setting

Track

On

Off

Mode

Presenter

Humanoid Frame

Default

Tracking Hint

On

Off

Presenter

Zone

Auto Frame

Auto Zoom

Auto Tilt

When Auto Zoom or Tilt is off, camera stops moving to keep or filling automatically. Determine the zoom size and tilt position based on the zoom lens start position via character Target Retention Time.

Target Retention Time

6

Figure Size

Full

Half Body

Close Up

Custom

141

Tracking Start Position

Current Location

Character Position

Left

Middle

Right

Auto Zoom: Usually remains the default. When “Auto Zoom” is turned off, the camera lens can still move, but can only maintain the current magnification and cannot zoom.

Auto Tilt: Usually remains default. When “Auto Tilt” is turned off, the camera lens can only move horizontally.

Target Retention Time: can remain default. It is an important function to set how long it takes for the camera lens to stay at current position or return to preset position 1 after the tracking target is lost. The modification here takes effect immediately.

Step 4 Select the desired close-up effect.

● **Figure Size**

By selecting different modes, users can customize the proportion of characters in the close-up screen, which is a very important feature. The modification here takes effect immediately.

Full: The close-up image includes tracking the entire body of the target, as shown in the following figure.

Live

Video

Tracking

Image

Audio

System

Network

NDI® Config

Information

⬆

⬅

⬇

➡

⬆

Zoom In

Zoom Out

Focus In

Focus Out

Pan Speed

10

Tilt Speed

10

Zoom Speed

5

Focus Speed

5

Focus Mode

Auto

Set

Call

PTZ

Back

Tracking Settings

Track

On

Off

Mode

Presenter

Humanoid frame

Default

Tracking hint

On

Off

Presenter

Zone

Auto Frame

Auto Zoom

Auto Tilt

When Auto Zoom or Tilt is off, camera stops moving to keep or filling automatically. Determine the zoom size and tilt position based on the tracking start position via character Target Retention Time.

Target Retention Time

6

Figure Size

Full

Half Body

Close Up

Custom

110

Tracking Start Position

Current Location

Character Position

Left

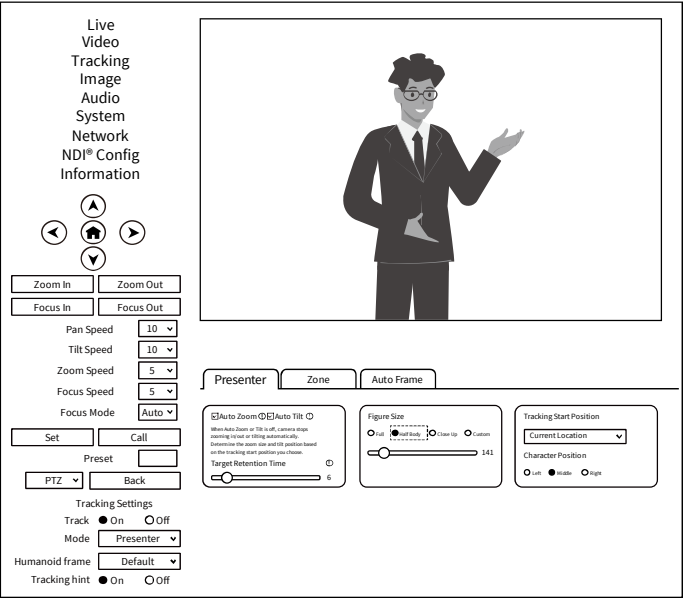
Middle

Right

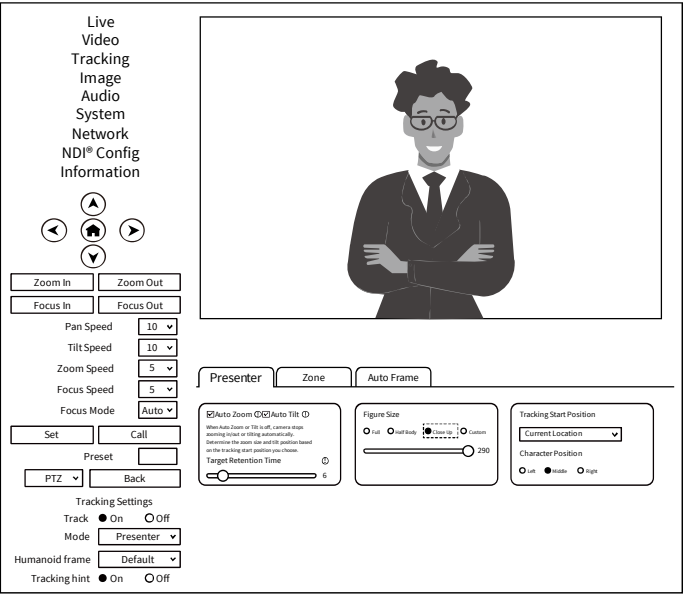


13

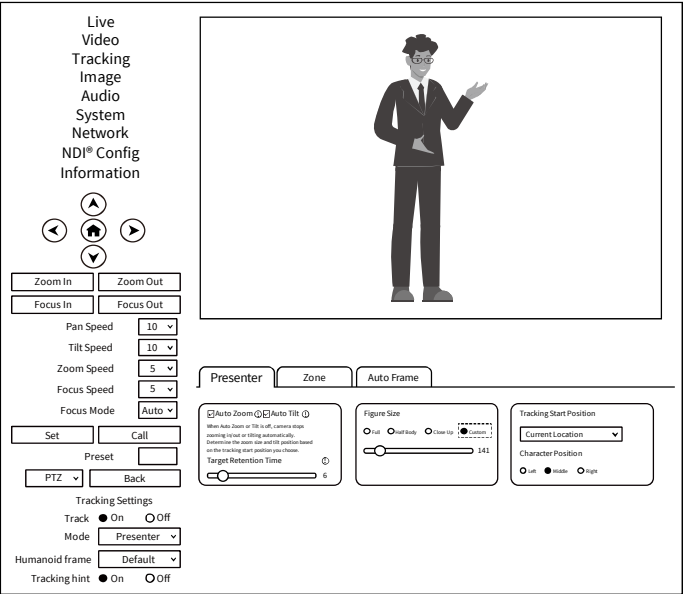
Half Body: The close-up image includes tracking the target above the knee, as shown in the following figure.



Close Up: The close-up image includes tracking the target above the waist, as shown in the following figure.



Custom: Adjust the tracking target proportion size.



If the proportion set is large, the proportion of the tracking target in the camera screen will also increase. When the tracking target moves rapidly, the camera may not keep up.

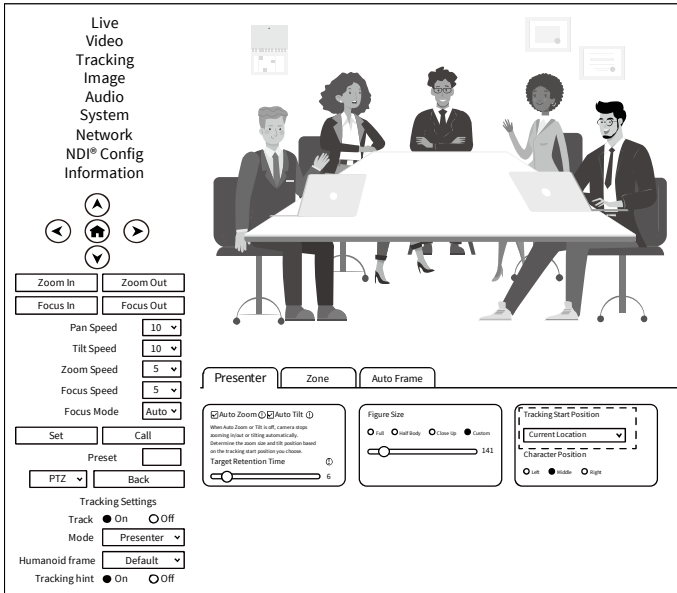
● **Tracking Start Position**

The user can choose the position of the camera lens when starting and stopping tracking.

Two Mode: Current Location/Preset 1

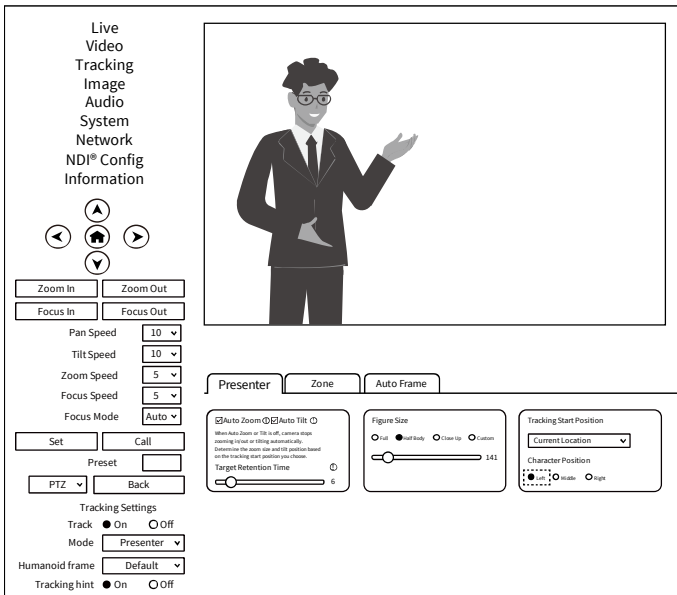
If you choose “Current Location”, the camera position when tracking is turned on is the current position; Similarly, the camera position when stopping tracking will also stop at the current position.

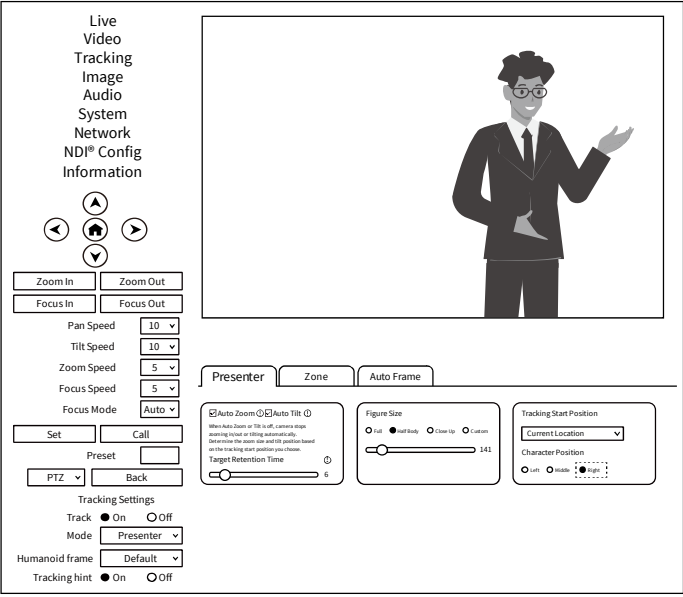
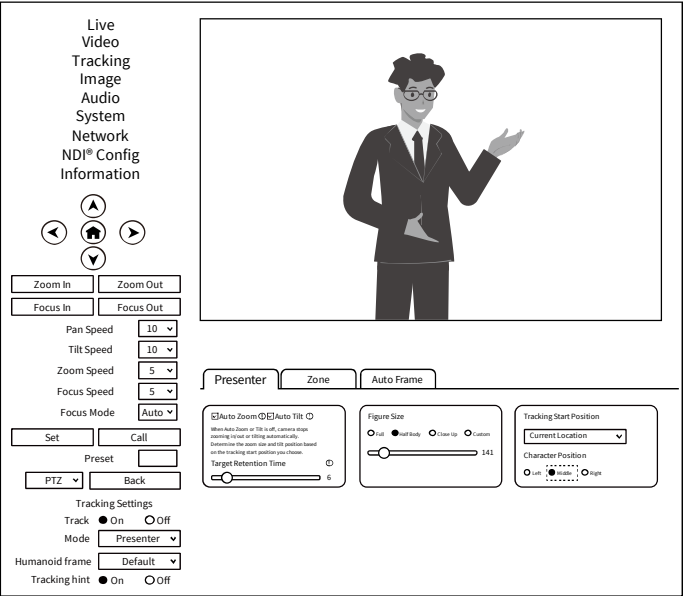
If you choose “Preset 1”, you need to set additional preset position 1 for the camera. When tracking is turned on, the camera will first move to Preset 1. If someone enters the video screen at this time, the camera will automatically track. When the tracking target is lost (exceeding the timeout), the camera will automatically move to Preset 1.



● **Character Position**

Character Position: defaults to median. Left or right can be selected by oneself, and this function is mostly used for live streaming scenes.





Step 5 According to the requirements of the application scenario, you can choose whether to require “Humanoid frame” and “Tracking hint”.

Humanoid frame: Debug/Off/Default

Debug: Turn on tracking, and the humanoid box will always appear on the tracking target. This feature is only applicable for debugging or demonstration.

Off: When selecting a tracking target, the humanoid box is not displayed at all. This feature is suitable for live streaming scenarios.

Default: After turning on tracking, if there are multiple people in front of the camera and pressing the direction key to select the tracking target, this box will automatically appear. After pressing the HOME key to confirm tracking, this box will disappear and the camera will start tracking.

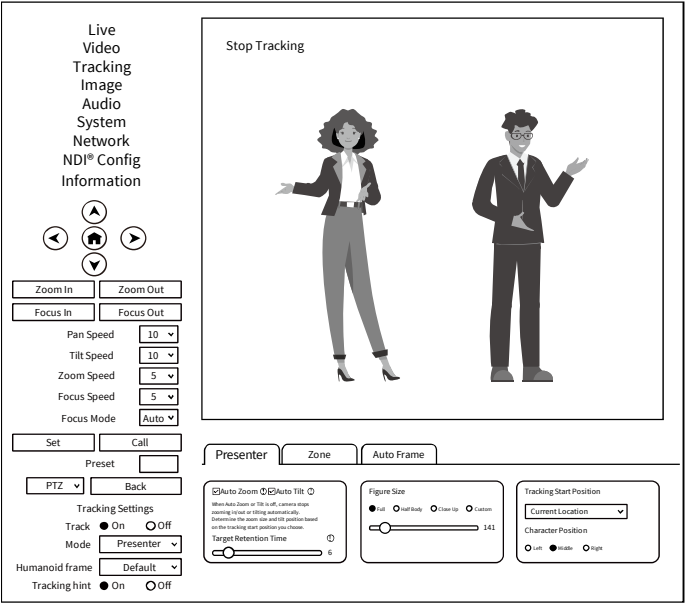
A screenshot of the 'Tracking Settings' menu. It contains three settings: 'Track' with a radio button set to 'On', 'Mode' with a dropdown menu showing 'Presenter', and 'Humanoid Frame' with a dropdown menu showing 'Default'. Below these is a 'Tracking Hint' section with a dropdown menu showing 'Debug Off' and a 'Default' button at the bottom.

Tracking Hint: On/Off

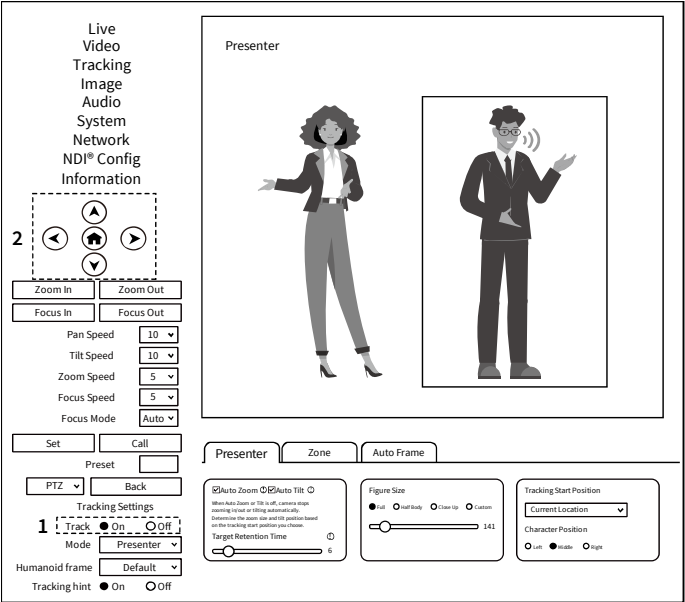
On: There will be a prompt in the upper left corner of the video during switch tracking.

Off: There is no prompt in the upper left corner of the video during switch tracking. This function is also applicable to live streaming scenarios.

Tracking Hint ☒ On ☐ Off



Step 6 Turn on tracking, press the arrow keys to select the tracking target, and then press Home to confirm.



● Area Tracking (Zone)

Function: Divide the frequently active areas of the tracking target into several areas (A, B, C, D) as needed, and set corresponding preset positions and save them. When the tracking target enters this area, the camera will automatically call the preset position corresponding to the area to achieve tracking.

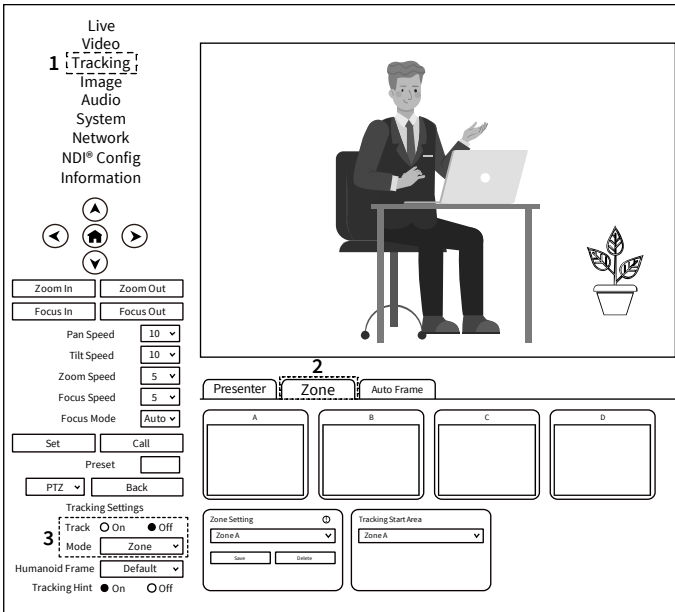
Operation Steps:

Step 1 Entering the camera IP address (192.168.100.88) in the browser prompts a login interface.

Input the username and password to access the camera WEB interface.

`http://192.168.100.88`

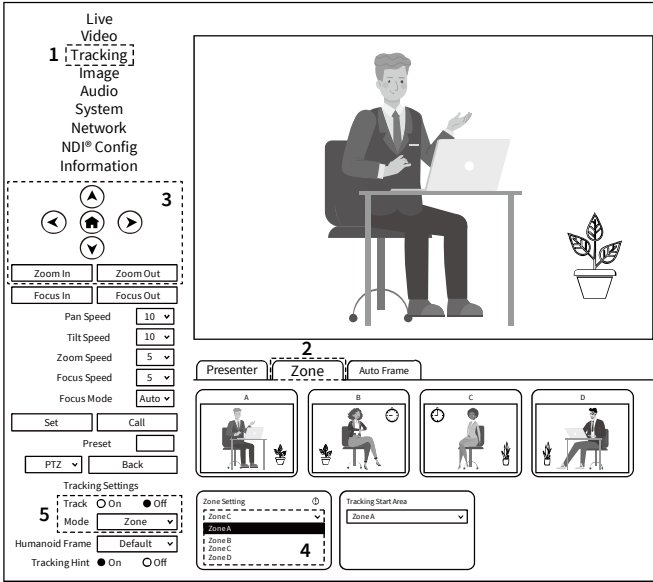
Step 2 Enter the “Tracking” page and select “Zone”. In the track off state, set the tracking parameters.



Step 3 Use the directional and zoom keys on the WEB interface to adjust the camera position.

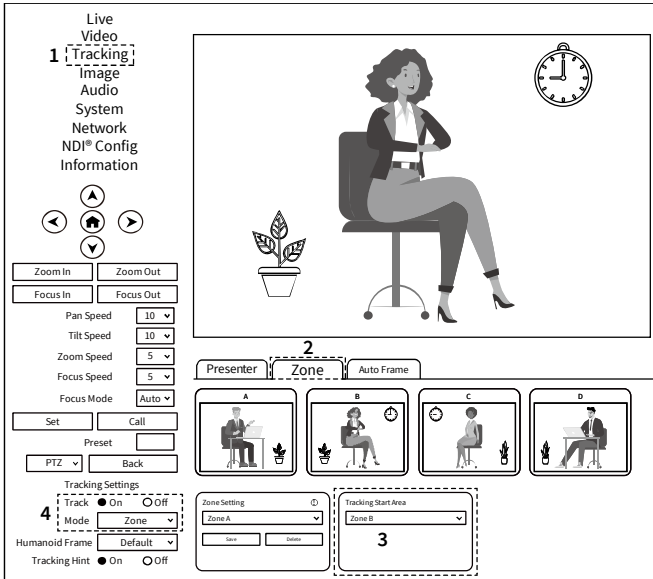
Set multiple preset positions such as zone A from left to right and select “Save” to save.

Set the number of preset positions according to the actual application needs, with a maximum of 4 available. If set incorrectly, you can delete or reconfigure them. Ensure that adjacent areas overlap and are arranged sequentially, which can include crossing letters (e.g., A and C).



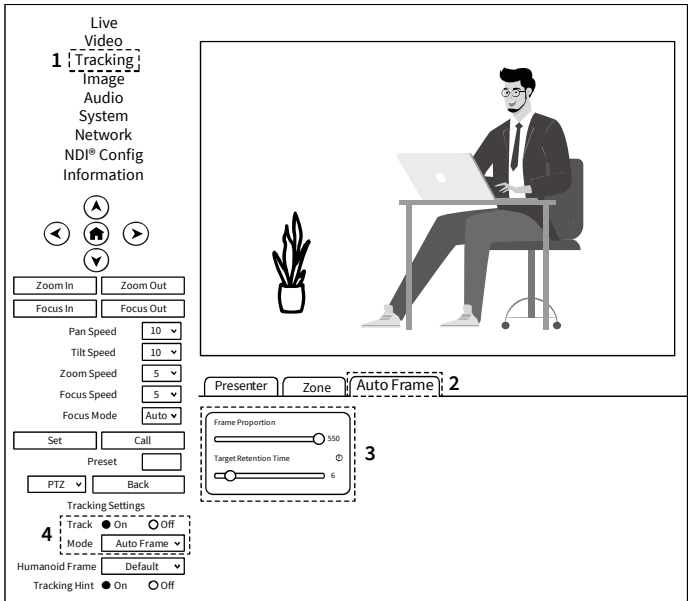
● Tracking Start Area

Tracking Start Area: You can choose any zone as the tracking start or end position. When tracking is turn on, the camera will first move to the start zone. If someone enters the video frame, the camera will automatically track them. As the person moves to the next zone, the camera will follow their movement to the corresponding area. Once the person exits the set zones, the camera will remain stationary in its original position.



● **Auto Frame**

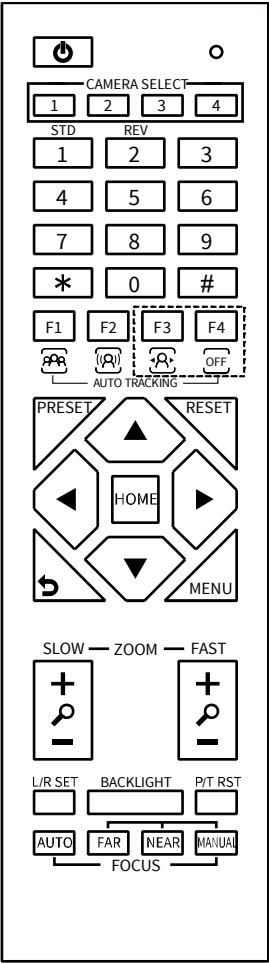
When the selection ratio is smaller, the proportion of the person in the frame is smaller. If the selection ratio is at its minimum of 200, the camera does not zoom regardless of the size of the person in the frame. When the selection ratio exceeds 200, the camera zooms based on the size and proportion of the person.



7.2 Remote Control

[F3]: Turn on Tracking

[F4]: Turn Off Tracking



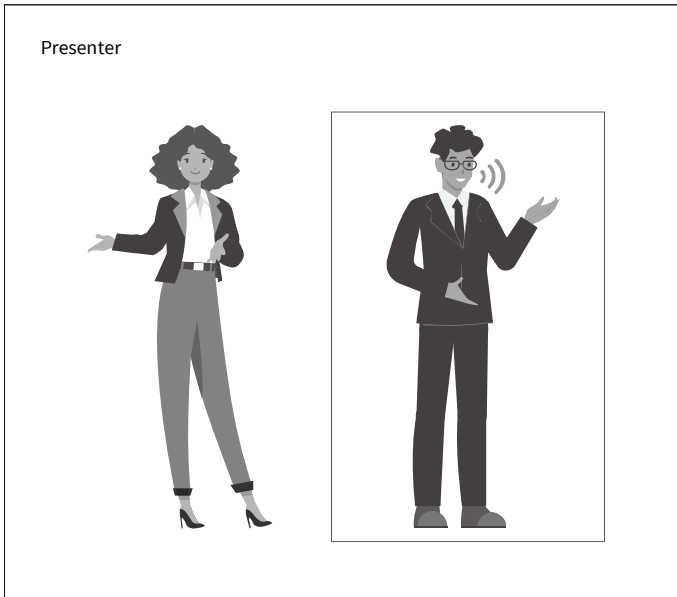
7.3 Target Selection

- **Single Person Scenario**

When there is only one person in the scene, enabling tracking through the web or remote control will directly enable tracking and track the target.

- **Multi Person Scenario**

If there are multiple people in the scene, after turning on tracking, you need to manually select the tracking target. You can use the left and right keys on the remote control or WEB to select the tracking target, and then press the HOME key on the remote control or WEB to turn on tracking and select the target. If the tracking target is not selected, the camera will automatically select the person closest to the center of the image as the tracking target.



8 Active NDI License for Camera

Before you begin, please ensure that you have purchased an exclusive NDI License Key from the product manufacturer. Once you purchase the NDI License Key, you must email the product manufacturer with your camera MAC address and Device Serial Number to receive your license details. Follow the steps below to find this information and active the NDI License for your camera.

Step 1 Establish a Wired Network Connection for the Camera

1. Power your camera using the provided power cable and adapter.
2. Connect your camera to an external display using an HDMI cable. Do not plug the camera into a computer using HDMI; the HDMI device must be display only, such as a TV or monitor. Alternatively, you can connect the camera to your computer using the provided USB cable.
3. Use an Ethernet cable to connect the camera to a router.

Step 2 Access the Camera via IP Address

1. Once a wired network connection is established, access the camera's IP address by entering the default IP address (192.168.100.88) into your web browser.

http://192.168.100.88

Sign in to access this site

Authorization required by http://192.168.100.88

Your connection to this site is not secure

Username

Password

Sign in

Cancel

2. Use “admin” for both the username and password to access the camera.

http://192.168.100.88

Sign in to access this site

Authorization required by http://192.168.100.88

Your connection to this site is not secure

Username

admin

Password

.....

Sign in

Cancel

Step 3 Send the MAC Address and Device Serial Number to the product manufacturer.

1. After logging in, navigate to the “Network” page to find the MAC address.

http://192.168.100.88

Live
Video
Tracking
Image
Audio
System
Network
NDI® Config
Information

⬆

⬅

🏠

➡

⬇

Zoom In

Zoom Out

Focus In

Focus Out

Lan Settings

IP Configuration Type

Fixed IP Address

IP Address

192.168.100.88

Subnet Mask

255.255.255.0

Gateway

192.168.100.1

DNS Address

8.8.8.8

MAC Address

D4:E0:8E:XX:XX:XX

Submit

Cancel

2. Navigate to the “Information” page to locate the Device Serial Number.

http://192.168.100.88

Live
Video
Tracking
Image
Audio
System
Network
NDI® Config
Information

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⬅️🏠➡️
⬇️

Zoom InZoom Out

Focus InFocus Out

Information

Device IDPTZ Camera

Device TypeV,F1

Software VersionX8.02.15

Webware Versionv1.5.5

Device Serial NumberXXXXXXXXXX

Submit

Cancel

3. Send this information to the product manufacturer to receive your NDI License key.

Step 4 Activate the NDI License

1. After receiving the NDI License key from the product manufacturer, navigate to the “NDI® Config” page.
2. Input the NDI License key into the “Key” field, click “Submit” to activate the NDI license.
3. After submit the NDI License key, the “NDI® Config” field will display “OK” indicating that the activation was successful.

http://192.168.100.88

Live
Video
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Network
NDI® Config
Information

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⬇️

Zoom InZoom Out

Focus InFocus Out

NDI® Config

Full NDI®☒ On ☐ Off

NDI® Licensefail

Server IP192.168.100.1

Group NamePublic

KeyXXXXXXXXX

NDI® Firmware Versionv5.1.1

Submit

Cancel

http://192.168.100.88

Live
Video
Tracking
Image
Audio
System
Network
NDI® Config
Information

⬅️

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⬅️

⬆️

➡️

Zoom In

Zoom Out

Focus In

Focus Out

NDI® Config

Full NDI®

☒ On ☐ Off

NDI® License

OK

Server IP

192.168.100.1

Group Name

Public

Key

XXXXXXXX

NDI® Firmware Version

v5.1.1

Submit

Cancel

Step 5 Download and Install NDI Tools

To gain access to NDI tools, including NDI Scan Converter, NDI Studio Monitor and other utilities, you'll need to download the NDI Tools pack from the NewTek website.

1. Go to <https://ndi.video/tools/ndi-core-suite/>.
2. Under Download NDI Tools, click on either  Windows or  MacOS to download the right version of the tool for your system.

NDI. Technology Tools Industries Community Resources For Developers

Download NDI Tools

NDI® TOOLS

All the tools and plugins you need to connect, stream and share your content.

Download NDI Tools

 Windows

 MacOS

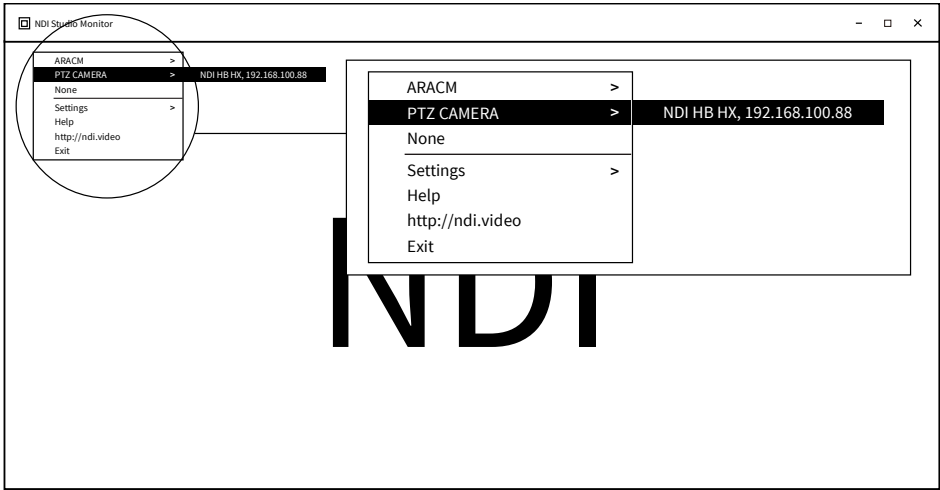
Version 6.0.1

3. Finish installing the NDI Tools on your computer.

Step 6 Connect NDI Sources

Once you have NDI Tools installed, connecting NDI sources is straightforward.

1. Ensure the camera is on the same local network as your computer.
2. Use the NDI Scan Converter utility to convert the camera signal into an NDI stream.
3. Launch the NDI Studio Monitor app and select your video input.
4. Click on the menu icon and select the NDI source to see the real-time video signal from camera.



5. If you're using streaming tools such as OBS Studio or Vmix, visit their support pages for more information about using the NDI application on their platforms.

9 Command List

By default, CGI commands are checked by examining the Referer field in the HTTP header to ensure that they can only be accessed through the camera's built-in web page. You can change the settings to prevent CGI requests from being rejected by this Referer check feature. If you are using CGI commands that allow Referer checks, you can do this by adding the Referer header to the HTTP header when creating the CGI request, as shown below.

Referer: http://<camera_address>/r\n

Where <camera_address> is the IP address of the camera (when the HTTP port number is 80).

9.1 Visca Control Command

Module	Control Command		VISCA Command	Description	Description
EXPOSURE	Mode	—	8x 01 04 39 0p FF	p: 0=Auto, 3=Manual, A=SAE, B=AAE, D=Bright	—
	ExpCompMode	—	8x 01 04 3E 0p FF	p: 2=On, 3=Off	—
	ExpComp	DIRECT	8x 01 04 4E 00 00 00 0p FF	p: Expcomp 0(-7) to 7(0) to E(7)	Effective when the exposure mode is set to Auto and the exposure compensation is enabled
		RESET	8x 01 04 0E 00 FF	—	
		UP	8x 01 04 0E 02 FF	—	
		DOWN	8x 01 04 0E 03 FF	—	
	Gain Limit	DIRECT	8x 01 04 2C 0p FF	p: Gain Limit 0(0) to A(10)	Effective when exposure mode is Auto, SAE, AAE, Bright
		RESET	8x 0A 11 24 00 FF	—	
		UP	8x 0A 11 24 02 FF	—	
		DOWN	8x 0A 11 24 03 FF	—	
	Meter	—	8x 01 04 3A 0p FF	p: 0=Average, 1=Center, 2=Smart, 3=Top	Effective when exposure mode is Auto, SAE, AAE, Bright
	Backlight	—	8x 01 04 33 0p FF	p: 2=On, 3=Off	Effective when exposure mode is Auto
	DRC	DIRECT	8x 01 04 25 00 00 00 0p FF	p: DRC 0(0) to 8(8)	Effective in all exposure modes
		RESET	8x 01 04 25 00 FF	—	

Module	Control Command		VISCA Command	Description	Description
EXPOSURE	DRC	UP	8x 01 04 25 02 FF	—	
		DOWN	8x 01 04 25 03 FF	—	
	Anti-Flicker	—	8x 01 04 23 0p FF	p: 0=Off, 1=50HZ, 2=60HZ	Effective when exposure mode is Auto, AAE, Bright
	Shutter	DIRECT	8x 01 04 4A 00 00 0p 0q FF	pq: Shutter Position (00-11)	- Effective when the exposure mode is Manual, SAE. - Shutter speed is synchronized with frame rate.
		RESET	8x 01 04 0A 00 FF	—	
		UP	8x 01 04 0A 02 FF	—	
		DOWN	8x 01 04 0A 03 FF	—	
	Iris	DIRECT	8x 01 04 4B 00 00 0p 0q FF	pq: 00=Close, 01=F11.0, 02=F9.6, 03=F8.0, 04=F7.3, 05=F6.8, 06=F6.2, 07=F5.6, 08=F5.2, 09=F4.8, 0A=F4.4, 0B=F4.0, 0C=F3.7, 0D=F3.4, 0E=F3.1, 0F=F2.8	Effective when exposure mode is Manual, AAE
		RESET	8x 01 04 0B 00 FF	—	
		UP	8x 01 04 0B 02 FF	—	
		DOWN	8x 01 04 0B 03 FF	—	
	Gain	DIRECT	8x 01 04 0C 00 00 00 0p FF	p: Gain 0(0) to A(10)	Effective when exposure mode is Manual
		RESET	8x 01 04 0C 00 FF	—	
		UP	8x 01 04 0C 02 FF	—	
		DOWN	8x 01 04 0C 03 FF	—	
	Bright	DIRECT	8x 01 04 0D 00 00 00 0p FF	p: Bright 0(0) to E(14)	Effective when exposure mode is Bright
		RESET	8x 01 04 0D 00 FF	—	
		UP	8x 01 04 0D 02 FF	—	
		DOWN	8x 01 04 0D 03 FF	—	

Module	Control Command		VISCA Command	Description	Description
COLOR	WB Mode	Mode	8x 01 04 35 pq FF	pq: 00=Auto, 01=Indoor, 02=Outdoor, 03=OnePush, 05=Manual, 20=VAR	—
	RG Tuning	—	8x 01 04 12 00 00 0p 0q FF	pq: RG Tuning 00(-10) to 0A(0) to 14(10)	Effective when white balance mode is Auto, One Push, VAR
		—	8x 0A 01 12 pq FF	pq: RG Tuning 00(-10) to 0A(0) to 14(10)	
	BG Tuning	—	8x 01 04 13 00 00 0p 0q FF	pq: BG Tuning 00(-10) to 0A(0) to 14(10)	
		—	8x 0A 01 13 pq FF	pq: BG Tuning 00(-10) to 0A(0) to 14(10)	
	Saturation	—	8x 01 04 49 00 00 00 0p FF	p: Saturation 0(60%) to E(200%)	Effective in all white balance modes
	HUE	—	8x 01 04 4F 00 00 00 0p FF	p: HUE 0(0) to E(14)	Effective in all white balance modes
	One push trigger	—	8x 01 04 10 05 ff	—	Effective when white balance mode is One Push
	R Gain	DIRECT	8x 01 04 43 00 00 0p 0q FF	pq: R Gain 00(0) to ff(255)	Effective when the white balance mode is Manual
		RESET	8x 01 04 03 00 FF	—	
		UP	8x 01 04 03 02 FF	—	
		DOWN	8x 01 04 03 03 FF	—	
	B Gain	DIRECT	8x 01 04 44 00 00 0p 0q FF	pq: B Gain 00(0) to ff(255)	
		RESET	8x 01 04 04 00 FF	—	
		UP	8x 01 04 04 02 FF	—	
		DOWN	8x 01 04 04 03 FF	—	
COLOR	Color temp	DIRECT	8x 01 04 20 0p 0q FF	pq: Color temp: 00(2500K) to 37(8000K)	Effective when white balance mode is VAR

Module	Control Command		VISCA Command	Description	Description
COLOR	Color temp	RESET	8x 01 04 20 00 FF	—	
		UP	8x 01 04 20 02 FF	—	
		DOWN	8x 01 04 20 03 FF	—	
Image	Luminance	—	8x 01 04 A1 00 00 00 0p FF	pq: Luminance 0(0) to E(14)	—
	Contrast	—	8x 01 04 A2 00 00 00 0p FF	pq: Contrast 0(0) to E(14)	—
	Sharpness	DIRECT	8x 01 04 42 00 00 00 0p FF	pq: Sharpness 0(0) to B(11)	—
		RESET	8x 01 04 02 00 ff	—	—
		UP	8x 01 04 02 02 FF	—	—
		DOWN	8x 01 04 02 03 FF	—	—
	B&W-Mode	Mode	8x 01 04 63 0p FF	p: 4=On, 0=Off	—
	Flip	—	8x 01 04 A4 0p FF	p: 1=Flip-H, 2=Flip-V, 3=Flip-HV, 0=Flip-off	Reboot to take effect
		CAM_LR_Reverse	8x 01 04 61 0p FF	p: 2=On, 3=Off	
		CAM_PictureFlip	8x 01 04 66 0p FF	p: 2=On, 3=Off	
	Gama	—	8x 01 04 5B 0p FF	p: 0=Default, 1=0.45, 2=0.5, 3=0.56, 4=EXT, 5=PC	—
NOISE REDUCTION	NR3D-LEVEL	—	8x 01 04 54 0p FF	p: 0=Close, 1(1) to 9(9)	—
OSD	OSD ON	—	8x 01 04 3F 02 5F FF	—	—
	OSD enter	—	8x 01 06 06 05 FF	—	—
	OSD back	—	8x 01 06 06 04 FF	—	—
	OSD OFF/ON	—	8x 01 06 06 10 FF	—	—
	Preset position 95 is defined as open menu	—	8x 01 04 3F 02 5F FF	—	—
	visca_exit_osd_menu_two	—	8x 01 06 06 06 FF	—	—

Module	Control Command		VISCA Command	Description	Description
PT	LR_Reverse	—	8x 01 04 61 0p FF	p: 2=On, 3=Off	—
	visca_pt_up	Up	8x 01 06 01 VV WW 03 01 FF	W: Pan speed 00 (low speed-1) to 17 (high speed-24) WW: Tilt speed 00 (low speed-1) to 13 (high speed-20) YYYY: Pan Position ZZZZ: Tilt Position	Can be used to control the menu, want to send two consecutive Up, Down, Left or Right commands, you need to send a stop command in the middle 8x 01 06 01 VV WW 03 03 FF
	visca_pt_down	Down	8x 01 06 01 VV WW 03 02 FF		
	visca_pt_left	Left	8x 01 06 01 VV WW 01 03 FF		
	visca_pt_right	Right	8x 01 06 01 VV WW 02 03 FF		
	visca_pt_left_up	Up left	8x 01 06 01 VV WW 01 01 FF		—
	visca_pt_right_up	Up right	8x 01 06 01 VV WW 02 01 FF	YYYY: Pan Position ZZZZ: Tilt Position	—
	visca_pt_left_down	Down Left	8x 01 06 01 VV WW 01 02 FF		—
	visca_pt_right_down	Down Right	8x 01 06 01 VV WW 02 02 FF		—
	visca_pt_stop	Stop	8x 01 06 01 VV WW 03 03 FF		—
	visca_pt_abs	Absolute Position	8x 01 06 02 VV WW 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF		—
	visca_home	Home	8x 01 06 04 FF		—
	visca_pt_reset	Reset	8x 01 06 05 FF		PTZ Reset
Zoom	visca_zoom	Stop	8x 01 04 07 00 FF	—	—
		Tele(Standard)	8x 01 04 07 02 FF	—	—
		Wide(Standard)	8x 01 04 07 03 FF	—	—
		Tele(Variable)	8x 01 04 07 2p FF	p: zoom speed 0(low-0) to 7(high-7)	—
		Wide(Variable)	8x 01 04 07 3p FF	—	—

Module	Control Command		VISCA Command	Description	Description
Zoom	visca_track_zoom	Tele(Standard)	8x 0a 04 07 02 01 FF	—	Use only when tracking is enabled
		Wide(Standard)	8x 0a 04 07 03 01 FF	—	
		Tele(Variable)	8x 0a 04 07 2p 01 FF	p: zoom speed	
		Wide(Variable)	8x 0a 04 07 3p 01 FF	0(low-0) to 6(high-7)	
	visca_zoom_to_speed	speed zoom to	8x 0A 04 47 pq 0r 0s 0a 0b FF	Variable Focus Position: pq: zoom speed 00(low) to 07(high), rsab: Zoom Position	—
	visca_zoom_to	Direct	8x 01 04 47 0p 0q 0r 0s FF	pqrs: Zoom Position Maximum pqrs: 4000	—
	visca_IF_Clear_cmd	Stop	8x 01 00 01 FF	—	Stop the current action, but do not stop relative or absolute motion
Image Freeze	freeze	—	8x 01 04 62 0p ff	p: 2=On, 3=Off	—
Focus	visca_focus	Stop	8x 01 04 08 00 FF	—	Provided manual focus is used
		Far(Standard)	8x 01 04 08 02 FF	—	
		Near(Standard)	8x 01 04 08 03 FF	—	
		Far(Variable)	8x 01 04 08 2p FF	p: Focus speed 0	
		Near(Variable)	8x 01 04 08 3p FF	(low-0) to 7(high-7)	
	visca_focus_to	Direct	8x 01 04 48 0p 0q 0r 0s FF	pqrs: Focus Position	
Focus	visca_focus_mode	Auto Focus	8x 01 04 38 02 FF	—	—
		Manual Focus	8x 01 04 38 03 FF	—	—
		One-touch focus	8x 01 04 38 04 FF	—	Trigger automatic focus once, and switch to manual focus mode after focusing is complete.
		Auto/Manual	8x 01 04 38 10 FF	—	Automatically issuing this command will switch to manual mode, and other modes will switch to automatic mode.

Module	Control Command		VISCA Command	Description	Description
Focus	visca_zoom_focus_to	ZoomFocus	8x 01 04 47 0p 0q 0r 0s 0t 0u 0v 0w FF	pqrs: Zoom Position tuvw: Focus Position	—
	FOCUS SETUP	AF-Zone	8x 01 04 AA 0p FF	p: 0=Top, 1=Center, 2=Bottom, 3=Front	—
		AF-Sense	8x 01 04 58 0p FF	p: 1=High, 2=Normal, 3=Low	—
		ND-Mode	8x 0A 01 07 0p FF	p: 0=Off, 1=1/4, 2=1/16, 3=1/64	—
		Night Mode	8x 0A 01 08 0p FF	p: 0=Off, 1=On	—
	focus_lock	—	8x 0a 04 68 02 FF	—	—
	focus_unlock	—	8x 0a 04 68 03 FF	—	—
EIS	EIS	—	8x 0a 01 0d 0p ff	p: 0=Off, 1=On	Restart takes effect
Tally Light	tally mode	—	8x 0A 11 47 0p FF	p: 2=On, 3=Off	Default is on
	tally set	—	8x 0A 02 02 0p 0q FF	p: led mode 1=1s flashing 2=Indicator always on 3=Return to normal (light off) q: led color 0=green light 1=red light	—
		—	8x 01 7E 01 0A 00 0p FF	p: 1=green light 2=red light 3=Restore to normal (light off)	—
	Tally Brightness	—	8x 0A 02 03 0p ff	p: 0=Low, 1=Medium, 2=High, 4=Off	—

Module	Control Command		VISCA Command	Description	Description
Preset	set_memory	—	8x 01 04 3F 01 pq FF	pq: set Memory 00(0) to FE(254)	—
	recall_memory	—	8x 01 04 3F 02 pq FF	pq: recall Memory 00(0) to FE(254)	—
	clear_memory	—	8x 01 04 3F 00 pq FF	pq: set Memory 00(0) to FE(254)	—
Preset	clear_all_memory	—	8x 0A 11 26 00 FF	—	—
	Preset Speed	Up	8x 0A 11 35 02 FF	—	90(5A) as call Home bit, 95(5F) for on/off menu, 90~99(5A to 63) cannot set preset bit
		Down	8x 0A 11 35 03 FF	—	
		PTZ speed when calling preset positions	8x 0A 04 3F 02 pq rs ab cd FF	pq: zoom speed (00 to 07) rs: horizontal speed ab: vertical speed cd: preset position number (00 to FE)	—
				Call Preset Speed	
	Call Preset Speed	—	8x 01 06 01 pq FF	pq: speed 00(0) to 17(24)	—
AUDIO	Audio	—	8x 2A 01 1B 0p FF	p: 2=LINE IN, 3=MIC, 4=XLR	Restart takes effect
Tracking Setting	Track Enable	—	8x 0A 11 54 0p FF	p: 2=On, 3=Off	—
	Tracking Mode	—	8x 0A 01 04 1C 0p FF	p: 3=Presenter, 4=Zone, 5=Frame	—
	Humanoid frame	—	8x 0A 11 56 0p FF	p: 3=Off, 4=Default	—
	Target Selection	—	8x 0A 11 A3 0p FF	p: 2=left, 3=right, 4=OK	—
	Figure Size	—	8x 0A 0F 01 00 0p FF	p: 0=Full, 1=HalfBody, 2=CloseUp, 3=Custom	—
Motion Sync	Mode	—	8x 0A 11 13 0p FF	p: 0=Off, 1=On	—
Restart	Restart	—	8x 0B 01 AA FF	—	—
	Power	—	8x 01 04 00 0p FF	p: 2=On, 3=Off	—

Module	Control Command		VISCA Command	Description	Description
Infrared address settings	—	—	8x 0A 11 a7 0p FF	p: 1=Infrared address 1 2=Infrared address 2 3=Infrared address 3 4=Infrared address 4	—
Restore default	visca_setting_reset	CAM_SettingReset Restore default	8x 01 04 A0 10 FF	—	Restore menu to default
	visca_hi351x_net_reset	Reset to default IP and password	8x 0A 01 AA FF	—	—

9.2 Visca Query Command

Query Command		VISCA	Return Code	Description
visca_video_on_off_query_cmd	CAM_PowerInq	8x 09 04 00 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_zoom_query	CAM_ZoomPosInq	8x 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Zoom Position
visca_pt_pos_query	Pan-tiltPosInq	8x 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	www: Pan Position zzzz: Tilt Position
visca_focus_query	CAM_FocusPosInq	8x 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position
visca_focus_mode_query	CAM_FocusAFModelInq	8x 09 04 38 FF	y0 50 0p FF	p: 2=Auto Focus, 3=Manual Focus
visca_af_sensitivity_query	CAM_AFSensitivityInq	8x 09 04 58 FF	y0 50 0p FF	p: 1=High, 2=Normal, 3=Low
visca_af_region_query	CAM_AFZone	8x 09 04 AA FF	y0 50 0p FF	p: 0=Top, 1=Center, 2=Bottom, 3=Front
visca_wb_mode_query	CAM_WBModelInq	8x 09 04 35 FF	y0 50 pq FF	pq: 00=Auto, 01=Indoor, 02=Outdoor, 03=One Push, 05=Manual, 20=VAR
visca_rg_query	R Gain	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R Gain 00(0) to ff(255)
visca_bg_query	B Gain	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B Gain 00(0) to ff(255)
visca_rgain_tuning_cmd_direct_query	RG Tuning	8x 09 04 12 FF	y0 50 00 00 0p 0q FF	pq: RG Tuning 00(-10) to 0A(0) to 14(10)
visca_bgain_tuning_cmd_direct_query	BG Tuning	8x 09 04 13 FF	y0 50 00 00 0p 0q FF	pq: BG Tuning 00(-10) to 0A(0) to 14(10)

Query Command		VISCA	Return Code	Description
visca_saturation_query	Saturation	8x 09 04 49 FF	y0 50 00 00 00 0p FF	p: Saturation 0(60%) to E(200%)
visca_hue_query	CAM_ColorHueInq	8x 09 04 4F FF	y0 50 00 00 00 0p FF	p: HUE 0(0) to E(14)
visca_color_temperature_query	Temperature	8x 09 04 20 FF	y0 50 00 00 0p 0q FF	pq: Colortemp:00(2500K) to 37(8000K)
visca_exposure_mode_query	CAM_AEModelInq	8x 09 04 39 FF	y0 50 0p FF	p: 0=Auto, 3=Manual, A=Shutter priority (SAE), B=Iris priority (AAE), D=Bright
visca_shutter_query	CAM_ShutterPosInq	8x 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: Shutter Position (00-11)
visca_iris_query	CAM_IrisPosInq	8x 09 04 4B FF	y0 50 00 00 0p 0q FF	pq: 00=Close, 01=F11.0, 02=F9.6, 03=F8.0, 04=F7.3, 05=F6.8, 06=F6.2, 07=F5.6, 08=F5.2, 09=F4.8, 0A=F4.4, 0B=F4.0, 0C=F3.7, 0D=F3.4, 0E=F3.1, 0F=F2.8
visca_me_gain_query	CAM_GainPosInq	8x 09 04 4C FF	y0 50 00 00 00 0p FF	p: Gain 0(0) to A(10)
visca_bright_query	CAM_BrightPosInq	8x 09 04 4D FF	y0 50 00 00 00 0p FF	pq: Bright 0(0) to E(14)
visca_exposure_com_mode_query	CAM_ExpCompModelInq	8x 09 04 3E FF	y0 50 0p FF	p: 2=On, 3=Off
visca_exposure_com_query	CAM_ExpCompPosInq	8x 09 04 4E FF	y0 50 00 00 00 0p FF	pq: Expcomp 0(-7) to 7(0) to E(7)
visca_backlight_query	CAM_BacklightModelInq	8x 09 04 33 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_gain_limit_to_query	CAM_GainLimitInq	8x 09 04 2C FF	y0 50 0q FF	p: Gain Limit 0(0) to A(10)
visca_drc_query	CAM_IridixInq	8x 09 04 A7 FF	y0 50 00 00 00 0p FF	pq: DRC 0(0) to 8(8)
visca_antiflicker_query	CAM_FlickerModelInq	8x 09 04 55 FF	y0 50 0p FF	p: Flicker Settings (0: OFF, 1: 50Hz, 2: 60Hz)
visca_noise3d_query	CAM_Noise3DModelInq3D	8x 09 04 54 FF	y0 50 0p FF	p: 0=Close, 1(1) to 9(9)
visca_luminance_query	CAM_LuminanceInq	8x 09 04 A1 FF	y0 50 00 00 00 0p FF	pq: Luminance 0(0) to E(14)
visca_contrast_query	CAM_ContrastInq	8x 09 04 A2 FF	y0 50 00 00 00 0p FF	pq: Contrast 0(0) to E(14)
visca_sharpness_query	CAM_ApertureInq	8x 09 04 42 FF	y0 50 00 00 00 0p FF	pq: Sharpness 0(0) to B(11)
visca_black_white_mode_query	CAM_PictureEffectModelInq	8x 09 04 63 FF	y0 50 0p FF	p: 2=Off, 4=On
visca_flip_hv_query	CAM_FlipInq	8x 09 04 A4 FF	y0 50 0p FF	p: 0=Off, 1=Flip-H, 2=Flip-V, 3=Flip-HV

Query Command		VISCA	Return Code	Description
visca_flip_h_query	CAM_horizontal flip	8x 09 04 61 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_flip_v_query	CAM_PictureFliping vertical flip	8x 09 04 66 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_gamma_to_query	CAM_GammaInq	8x 09 04 5B FF	y0 50 0p FF	p: 0=Default, 1=0.45, 2=0.5, 3=0.56, 4=EXT, 5=PC
visca_metering_mode_query	CAM_MeteringModelInq	8x 09 04 3A FF	y0 50 0p FF	p: 0=Average, 1=Center, 2=Smart, 3=Top
visca_menu_status_query	SYS_MenuModelInq	8x 09 06 06 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_LR_reverse query	LR_Reverse	8x 09 04 61 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_query_IR_addr	Infrared address query	8x 09 11 a7 ff	y0 50 0p ff	p: 1=Infrared address 1 2=Infrared address 2 3=Infrared address 3 4=Infrared address 4
visca_tally_led_en_query_cmd	Check tally mode status	8x 09 11 47 FF	y0 50 0p FF	p: 2=On, 3=Off
visca_tally_led_query_cmd	Check tally light status and color	8x 09 06 6A FF	y0 50 0p 0q FF	p: LED mode 1=1s flash 2=Constant on 3=Return normal (light off) q: LED color 0=Green light 1=Red light

9.3 CGI Command

9.3.1 Video Settings

Query: http://<camera_address>/cgi-bin/param.cgi?get_media_video

Set: http://<camera_address>/cgi-bin/param.cgi?post_media_video (It is post command)

CGI Item Name			Parameters	Value	Description
Video Settings	Video Setting	Video Format	vinorm	4KP60, 4KP59.94, 4KP50, 4KP30, 4KP29.97, 4KP25, 4KP24, 4KP23.98, 1080P60, 1080P59.94, 1080P50, 1080P30, 1080P29.97, 1080P25, 1080P24, 1080P23.98, 1080I60, 1080I59.94, 1080I50, 720P60	Video Format Setting

CGI Item Name			Parameters	Value	Description
Video Settings	Video Setting	Video Template	ndi_mode	Off, 264P50, 264P60, 4K264P50, 4K264P60, 265P50, 265P60, 4K265P50, 4K265P60	Video template settings, the frame rate of the video template will be synchronized to the frame rate of the video format.
	First Stream	Encode Codec	protocol_1	H264, H265, MJPEG	Setting of coding protocol for the first stream, when the coding protocol is MJPEG, I frame interval and bit rate control cannot be set.
		Encode Level	profile_1	mainprofile, highprofile	First stream encoding level setting (only works if the encoding protocol is H264 and the encoding level is highprofile).
		Resolution	size_1	PIC_UHD4K, PIC_HD1080, PIC_HD720, PIC_HD576, PIC_720_576, PIC_720_480, PIC_720_408, PIC_VGA, PIC_640_360	First stream resolution setting
		Bit Rate	bps_1	32 to 102400kbps	First stream bit rate setting, when the encoding protocol is H264 or H265, the web page will display this parameter.
		Qfactor	qfactor_1	1 to 99	First channel code flow factor setting, this parameter is displayed when the coding protocol is MJPEG.
		Frame Rate	fps_1	1 to 60fps	First stream frame rate setting, the frame rate set for the video format is the maximum value that can be set for this frame rate, for example, if the frame rate of the video format is 50 frames, the range of this frame rate is 1~50, if you set a value larger than the maximum value, the maximum value will be displayed.
		I Key Frame Interval	gop_1	2 to 1200	First stream I frame interval setting
		Bit Rate Control	rcmode_1	0, 1	0: CRB, 1: VRB first stream code rate control setting
	Second Stream	Encode Codec	protocol_2	H264, H265, MJPEG	Coding protocol setting for the second stream, when the coding protocol is MJPEG, other settings for the second stream cannot be set, and the resolution defaults to 640x360.
		Encode Level	profile_2	mainprofile, highprofile	Encoding level setting for the second stream (encoding level setting to highprofile only works if the encoding protocol is H264).

CGI Item Name			Parameters	Value	Description
Video Settings	Second Stream	Resolution	size_2	PIC_720_576, PIC_720_480, PIC_720_408, PIC_VGA, PIC_640_360, PIC_480_320, PIC_QVGA	Second stream resolution setting
		Bit Rate	bps_2	32 to 20480kbps	Second stream bit rate setting, when the encoding protocol is H264 or H265, the web page will display this parameter.
		Qfactor	qfactor_2	1 to 99	Second channel code flow quantization factor setting, this parameter is displayed when the encoding protocol is MJPEG (currently the code rate value is displayed).
		Frame Rate	fps_2	1 to 60fps	The frame rate of the second stream is set, the frame rate set by the video standard is the maximum value that this frame rate can be set to, for example, if the frame rate of the video standard is 50 frames, the range of this frame rate is 1~50, and if you set the value larger than the maximum value, it will only display the maximum value.
		I Key Frame Interval	gop_2	2 to 1200	Second Stream I Frame Interval Setting
		Bit Rate Control	rcmode_2	0, 1	0: CRB, 1: VRB Second stream code rate control setting

9.3.2 Tracking Settings

Query: http://<camera_address>/cgi-bin/param.cgi?getfulltrack

Set: http://<camera_address>/cgi-bin/param.cgi?postfulltrack (It is post command)

CGI Item Name			Parameters	Value	Description
Tracking Settings	Tracking Settings	Track	common.track	0, 1	0: Off (tracking disabled), 1: On (tracking enabled)
		Mode	common.track_mode	Tracking, Region, Auto frame	Tracking: Presenter (Speaker Tracking) Region: Zone (Area Tracking) Auto Frame (Frame Tracking)
		Humanoid frame	common.debug_mode	3, 4	3: Off, 4: Default
		Tracking hint	common.osd_mode	0, 1	0: Off (Menu tracking prompt off) 1: On (Menu tracking prompt on)

CGI Item Name			Parameters	Value	Description
Tracking Settings	Presenter	Auto Zoom	tracking.auto_zoom	0, 1	0: Disable Auto Zoom 1: Enable Auto Zoom
		Auto Tilt	tracking.auto_tilt	0, 1	0: Disable Auto Tilt 1: Enable Auto Tilt
		Target Retention Time	tracking.return_preset_time	5 to 15	Time to return to the starting point after losing the target
		Figure Size	tracking.body_mode	0, 1, 2, 4	0: Full 1: Half Body 2: Close Up 4: Custom
			tracking.body_thresh	80 to 290	When the character size is customized, you can set the character size by this parameter.
		Tracking Start Position	tracking.preset	-1, 1	-1: Current Location (tracking starts from the current location) 1: Preset 1 (tracking starts from preset 1)
		Character Position	tracking.stop_direction	left, median, right	Left: Left (character position is on the left) Median: Middle (character position is in the middle) Right: Right (character position is on the right)
		Tracking Sensitivity	tracking.sensitivity_thresh_level	-5 to 5	Set the tracking sensitivity; the higher the value, the more sensitive it is.
		Top Control	tracking.top_control_thresh_level	-5 to 5	Set vertical white space. The larger the value, the more white space will be left above the characters.
	Auto Frame	Frame proportion	autoframe.zoom_thresh	200 to 550	Set the selection ratio. The larger the value, the smaller the selection range.

9.3.3 Image Settings

Query: http://<camera_address>/cgi-bin/param.cgi?get_image_conf (current image configuration)

http://<camera_address>/cgi-bin/param.cgi?get_image_default_conf (default image configuration)

Set: http://<camera_address>/cgi-bin/param.cgi?post_image_value&<Key>&<Value>



- <Key>: The parameter you want to set
- <Value>: Value of the parameter setting
- This is a get command, which can be set directly through the browser.

CGI Item Name			Parameters	Value	Description
Image Settings	Exposure	Exposure Mode	aemode	auto(0), manual(3), shutter(10), iris(11), bright(13)	auto(0): Auto (auto exposure), manual(3): Manual (manual exposure), shutter(10): SAE (shutter priority), iris(11): AAE (aperture priority), bright(13): Bright (brightness priority)
	Color	WB Mode	wbmode	auto(0), indoor(1), outdoor(2), one push(3), manual(5), var(32)	auto(0): Auto (Auto White Balance), indoor(1): Indoor (Indoor White Balance), outdoor(2): Outdoor (Outdoor White Balance), manual(5): Manual (Manual White Balance), var(32): VAR (color temperature)
		Saturation	saturation	0 to 14	0: 60% saturation 14: Saturation of 200%
		Hue	hue	0 to 14	Color settings
	Image	Luminance	bright	0 to 14	Image brightness setting
		Contrast	contrast	0 to 14	Contrast setting
		Sharpness	sharpness	0 to 11	Sharpness settings
		Flip-H	mirror	0, 1	0: Horizontal Flip Disable 1: Horizontal Flip Enable Reboot to take effect
		Flip-V	flip	0, 1	0: Vertical Flip Disable 1: Vertical Flip Enable Reboot to take effect
	ND-MODE	ND-MODE	nd_mode	0, 1, 2, 3	0: Off 1: 1/4 2: 1/16 3: 1/64
	Night Mode	Night Mode	night_mode	0, 1	0: Off 1: On

9.3.4 Menu Settings

Set: http://<camera_address>/cgi-bin/ptzctrl.cgi?<Key>&<Value>



- <Key>: The parameter you want to set
- <Value>: Value of the parameter setting
- This is a get command, which can be set directly through the browser.

CGI Item Name			Parameters	Value	Description
Menu Settings	OSD	OSD Open	navigate_mode	OSD	When the menu is open, send this command to close the menu. When the menu is closed, send this command to open the menu.
		OSD Close	navigate_mode	PTZ	When the menu is open, sending this command closes the menu and enters PTZ mode.
		OSD Enter	navigate_mode	CONFIRM	Send this command to enter the next submenu.
		OSD Back	navigate_mode	OSD_BACK	Send this command to return to the previous menu.

9.3.5 PT Settings

PT Setting	CGI Command	Description
PT Up	<a href="http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&up&<Pan Speed>&<Tilt Speed>">http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&up&<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Down	<a href="http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&down&<Pan Speed>&<Tilt Speed>">http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&down&<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Left	<a href="http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&left&<Pan Speed>&<Tilt Speed>">http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&left&<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Right	<a href="http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&right&<Pan Speed>&<Tilt Speed>">http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&right&<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Right Up	<a href="http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&rightup&<Pan Speed>&<Tilt Speed>">http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&rightup&<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.

PT Setting	CGI Command	Description
PT Left Up	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&leftup<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Right Down	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&rightdown<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Left Down	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&leftdown<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.
PT Stop	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&ptzstop<Pan Speed>&<Tilt Speed>	Pan Speed: 1~24, Tilt Speed: 1~20, If no speed is specified, the default speed is 10.



Note

- This is a get command, which can be set directly through the browser.
- When the menu is open, this command can also be used to control the menu.

9.3.6 Zoom Settings

Zoom Setting	CGI Command	Description
Zoom Out	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&zoomout<zoom speed>	Zoom Speed: 1~7 If no speed is specified, the default speed is 5.
Zoom In	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&zoomin<zoom speed>	Zoom Speed: 1~7 If no speed is specified, the default speed is 5.
Zoom Stop	http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&zoomstop<zoom speed>	Zoom Speed: 1~7 If no speed is specified, the default speed is 5.



Note

This is a get command, which can be set directly through the browser.

9.3.7 Focus Settings

Focus Setting	CGI Command	Description
Focus Out	<code>http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&focusin<Focus Speed></code>	Focus Speed: 1~7 If no speed is specified, the default speed is 5.
Focus In	<code>http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&focusout<Focus Speed></code>	Focus Speed: 1~7 If no speed is specified, the default speed is 5.
Focus Stop	<code>http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&focusstop<Focus Speed></code>	Focus Speed: 1~7 If no speed is specified, the default speed is 5.
Manual_focus	<code>http://<camera_address>/cgi-bin/param.cgi?set_focus&manual_focus</code>	Manual Focus
Auto_focus	<code>http://<camera_address>/cgi-bin/param.cgi?set_focus&auto_focus</code>	Auto Focus
one_shot_focus	<code>http://<camera_address>/cgi-bin/param.cgi?set_focus&one_shot_focus</code>	One-touch focus (triggers automatic focus once, then switches to manual focus mode after focusing is complete).



This is a get command, which can be set directly through the browser.

9.3.8 Preset Settings

Preset	CGI Command	Description
Set Preset	<code>http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&posset<number></code>	Number: Set the preset position number, 90 as the Home position, 95 as the On/Off menu, and 90 to 99 cannot be set as preset positions.
Call Preset	<code>http://<camera_address>/cgi-bin/ptzctrl.cgi?ptzcmd&poscall<number></code>	Number: Set the preset position number, 90 as the Home position, 95 as the On/Off menu, and 90 to 99 cannot be set as preset positions.



This is a get command, which can be set directly through the browser.

9.3.9 Network Settings

Query: http://<camera_address>/cgi-bin/param.cgi?get_network_conf

IP Address Configuration: http://<camera_address>/cgi-bin/param.cgi?post_network_info_conf

(It is post command)

Port/RTMP/RTSP/ONVIF/Multicast/NTP/SRT/FreeD Configuration:

http://<camera_address>/cgi-bin/param.cgi?post_network_other_conf (It is post command)

CGI Item Name			Parameters	Value	Description
Network	Lan	IP Configuration Type	dhcp	0, 1	0: Fixed IP Address 1: Dynamic IP Address
		IP Address	ipaddr	Input IP address	Set IP address, reboot to take effect
		Subnet Mask	netmask	Input Subnet Mask	Set subnet mask, reboot to take effect
		Gateway	gateway	Input Gateway	Set gateway, reboot to take effect
		DNS Address	fdns	8.8.8.8	Default value, cannot be set
		MAC Address	macaddr	default value	Default value, cannot be set
	Port	HTTP Port	httpport	Valid range 80 or 1025~65535	Set HTTP port, reboot to take effect
		RTSP Port	rtspport	Valid range 554 or 1025~65535	Set RTSP port, reboot to take effect
		TCP Port	ptzport	Effective range 1025~65535	Set TCP port, default value 5678, reboot to take effect
		UDP Port	udpport	Effective range 1025~65535	Set UDP port, default value 1259, reboot to take effect
	RTMP_1	Mode	rtmp1_en	0, 1	0: Off 1: On Reboot to take effect
		Audio	rtmp1_audio_en	0, 1	0: Disable rtmp first stream audio 1: Enable rtmp first stream audio Reboot to take effect
		Video	rtmp1_video_en	0, 1	0: Disable rtmp first stream video 1: Enable rtmp first stream video Reboot to take effect
		MRL	rtmp1_mrl	rtmp://<Server ip>/live/streamid	Server IP: Server address reboot effective

CGI Item Name			Parameters	Value	Description
Network	RTMP_2	Mode	rtmp2_en	0, 1	0: Off 1: On Reboot to take effect
		Audio	rtmp2_audio_en	0, 1	0: Disable rtmp second stream audio 1: Enable rtmp second stream audio Reboot to take effect
	RTMP_1	Video	rtmp2_video_en	0, 1	0: Disable rtmp second stream video 1: Enable rtmp second stream video Reboot to take effect
		MRL	rtmp2_mrl	rtmp://<Server ip>/live/streamid	Server IP: Server address reboot to take effect
	RTSP	RTSP Auth	rtsp_auth_en	0, 1	0: Disable RTSP Auth 1: Enable RTSP Auth, after the opening of RTSP need to enter the user name and password, reboot to take effect
	ONVIF	Mode	onvif_en	0, 1	0: Disable Onvif 1: Enable Onvif Reboot to take effect
		ONVIF Auth	onvif_auth_en	0, 1	0: Disable ONVIF Auth 1: Enable ONVIF Auth, ONVIF requires username and password when enabled. Reboot to take effect
	Multicast	Mode	mcast_en	0, 1	0: Disable Multicast 1: Enable Multicast Reboot to take effect
		Address	mcast_addr	Input multicast address	Set multicast address, reboot to take effect
		Port	mcast_port	Input multicast port number	Set multicast port number, reboot to take effect
	NTP	NTP time sync	ntp_en	0, 1	0: Disable NTP 1: Enable NTP Reboot to take effect

CGI Item Name			Parameters	Value	Description
Network	NTP	Time Zone	ntp_time_zone	GMT12, GMT11, GMT10, GMT9, GMT8, GMT7, GMTA7, GMTB7, GMT6, GMTA6, GMTB6, GMTC6, GMT5, GMTA5, GMTB5, GMT4, GMTA4, GMTB4, GMT0330, GMT3, GMTA3, GMTB3, GMT2, GMT1, GMTA1, GMT0, GMTA0, GMT-1, GMTA-1, GMTB-1, GMTC-1, GMTD-1, GMT-2, GMTA-2, GMTB-2, GMTC-2, GMTD-2, GMT-2, GMT-3, GMTA-3, GMTB-3, GMTC-3, GMTD-3, GMT-4, GMTA-4, GMT-0430, GMT-5, GMTA-5, GMT-0530, GMT-0545, GMT-6, GMTA-6, GMTB-6, GMT-0630, GMT-7, GMTA-7, GMT-8, GMTA-8, GMTB-8, GMTC-8, GMTD-8, GMT-9, GMTA-9, GMTB-9, GMT-0930, GMTA-0930, GMT-10, GMTA-10, GMTB-10, GMTC-10, GMTD-10, GMT-11, GMT-12, GMTA-12, GMT-13, GMT-14	Setting the time zone
		Server address	ntp_addr	Enter the ntp server address	Set ntp server address, reboot to take effect
		Time interval(min)	ntp_time_interval	1~1440	Enter the time interval (min), reboot to take effect.
		Main time show	ntp_osd_show_1	0, 1	0: First stream does not display time 1: First stream display time Reboot to take effect
		Position_1	ntp_osd_x_1	0~100	Set the first stream time display position, reboot to take effect
			ntp_osd_y_1	0~100	
		Sub time show	ntp_osd_show_2	0, 1	0: Second stream does not display time 1: Second stream display time Reboot to take effect
		Position_2	ntp_osd_x_2	0~100	Set the second stream time display position, reboot to take effect
			ntp_osd_y_2	0~100	

CGI Item Name			Parameters	Value	Description
Network	SRT	SRT	srt_en	0, 1	0: Enable SRT 1: Disable SRT Reboot to take effect
		SRT Mode	srt_mode	caller, listener	Set SRT mode, reboot to take effect
		SRT Server	srt_server	Input SRT server address	Set SRT server address, effective when SRT Mode is Caller, effective after reboot.
		SRT Port	srt_port	Input SRT Port	Set SRT port, reboot to take effect
		SRT Encryption	srt_passsid	0, 1, 2, 3	0: None 1: AES-128 2: AES-192 3: AES-256 Reboot to take effect
		SRT Password	srt_passstr	Set SRT password	SRT password needs to be at least 10 characters, reboot to take effect
		SRT Bandwidth Overhead	srt_bw_precent	5%~100%	Set SRT bandwidth overhead, reboot to take effect
		SRT Variable Latency	srt_latency	20ms~800ms	Set SRT transmission delay, reboot to take effect
		SRT Streamid	srt_streamid_str	Input SRT StreamID	Set SRT StreamID, effective when SRT Mode is Caller, effective on reboot.
	FreeD	FreeD Data Output(Beta)	freedoutput_en	0, 1	0: Disable Freed Active Reporting 1: Enable Freed Active Reporting
		Destination IP	freeddestip	Enter the destination address	Set destination address, set reboot to take effect
		FreeD Control Port	freeddataport	Effective range 1025~65535	Default 19147, reboot to take effect
		FreeD Data Port	freedctrlport	Effective range 1025~65535	Default 19148, reboot to take effect

9.3.10 System Settings

Query: http://<camera_address>/cgi-bin/param.cgi?get_system_conf (Need to add token value)

Set: http://<camera_address>/cgi-bin/param.cgi?post_system_conf (This command is a post command and requires a token value to be added)

CGI Item Name		Parameters	Value	Description
System	UserName	username	admin	Default value, cannot be set
	Passwd	userpasswd	The password must be at least 9 characters long and must include numbers, lowercase letters, uppercase letters, and special characters. Such as [!\$% '*+,-./<=>?@[^_{} ~-]	-
	Guest	guestname	guest	Default value, cannot be set
	Passwd	guestpasswd	The password must be at least 9 characters long and must include numbers, lowercase letters, uppercase letters, and special characters. Such as [!\$% '*+,-./<=>?@[^_{} ~-]	This parameter takes effect when the Guest user is enabled.
	Guest Login	guestlock	0, 1	0: Enabled (Enable guest user) 1: Disabled (Disable guest user)
	Tally Brightness	tally_brightness	0, 1, 2, 3	0: Low 1: Medium 2: High 3: Off
	EIS	eisSwitch	0, 1	0: Off 1: On Reboot to take effect
	Motion Sync	motionSync	0, 1	0: Off 1: On
	Max Speed	motionSyncMax	0~7	Enable Motion Synchronization, set this parameter to take effect.

9.3.11 Audio Settings

Query: http://<camera_address>/cgi-bin/param.cgi?get_media_audio

Set: http://<camera_address>/cgi-bin/param.cgi?post_media_audio (It is post command)

CGI Item Name		Parameters	Value	Description
Audio	Audio Switch	audio_switch	0, 1	0: Off (Turn off the audio switch) 1: On (Turn on the audio switch) The audio switch is off, all audio interfaces are silent, and other audio parameters cannot be set. Reboot to take effect
	Audio Type	aeformat	AAC	Audio Format
	Sample Rate	samplerate	48K	Sample Rate
	Bit Rate	streamrate	96K, 128K	Bit Rate, reboot effective
	Input Type	audioinput	LINE IN, MIC, XLR	Input type, reboot to take effect
	Input Gain L	vol_left_in	0, 3, 6, 9, 12, 15, 18, 21, 24	Left channel volume
	Input Gain R	vol_right_in	0, 3, 6, 9, 12, 15, 18, 21, 24	Right channel volume
	Volume Level	vol_digital_gain_l	-20~20	The higher the volume level value, the higher the volume of the left and right channels.
	Phantom Power	phantom	0, 1	0: Off (Turn off the phantom switch) 1: On (Turn on the phantom switch) This parameter is displayed when the input type is XLR.
	ADTS Options	adts_flag	0, 1	0: Off 1: On

9.3.12 Return to Home

http://<camera_address>/cgi-bin/ptzctrl.cgi?osdcmd&home



It is get command and can be set directly through the browser.

9.3.13 PTZ Reset

http://<camera_address>/cgi-bin/param.cgi?pan_tiltdrive_reset



It is get command and can be set directly through the browser.

9.3.14 Screenshot

http://<camera_address>/snapshot.jpg



It is get command and can be set directly through a browser. It captures images from the second video stream.

9.4 Frame Rate and Shutter

Frame Rate	2160P60, 2160P59.94, 2160P30P, 2160P29.97, 1080P60, 1080P59.94, 1080P30, 1080P29.97, 1080I60, 1080I59.94, 720P60, 720P59.94	2160P50, 2160P25, 1080P50, 1080P25, 1080I50	2160P24, 2160P23.98, 1080P24, 1080P23.98	Command
Shutter	1/30	1/25	1/24	81 01 04 4A 00 00 00 01 FF
	1/60	1/50	1/48	81 01 04 4A 00 00 00 02 FF
	1/90	1/75	1/96	81 01 04 4A 00 00 00 03 FF
	1/100	1/100	1/100	81 01 04 4A 00 00 00 04 FF
	1/125	1/120	1/120	81 01 04 4A 00 00 00 05 FF
	1/180	1/150	1/144	81 01 04 4A 00 00 00 06 FF
	1/250	1/250	1/250	81 01 04 4A 00 00 00 07 FF
	1/350	1/350	1/350	81 01 04 4A 00 00 00 08 FF
	1/500	1/500	1/500	81 01 04 4A 00 00 00 09 FF
	1/725	1/725	1/725	81 01 04 4A 00 00 00 0A FF
	1/1000	1/1000	1/1000	81 01 04 4A 00 00 00 0B FF
	1/1500	1/1500	1/1500	81 01 04 4A 00 00 00 0C FF
	1/2000	1/2000	1/2000	81 01 04 4A 00 00 00 0D FF
	1/3000	1/3000	1/3000	81 01 04 4A 00 00 00 0E FF
	1/4000	1/4000	1/4000	81 01 04 4A 00 00 00 0F FF
	1/6000	1/6000	1/6000	81 01 04 4A 00 00 01 00 FF
	1/10000	1/10000	1/10000	81 01 04 4A 00 00 01 01 FF

10 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 video platform and TV that in correct connection.
- Image jitters after the camera is properly connected
 - 1) Ensure that the camera installation is in stable position.
 - 2) Check that any vibrating machinery or object near the camera.

- There is no video image in browser

That do not support IE browser and IE core browser, it is recommended to use Google, Firefox and Edge browsers. The camera video image will be displayed normally.

- Unable to access camera through the browser
 - 1) Using PC to access the network to test that the network access can work properly to eliminate the network fault caused by cable and PC virus until the PC and camera can ping each other.
 - 2) Disconnect the network, connect camera with PC separately and reset the IP address of PC if necessary.
 - 3) Ensure that the IP address, subnet mask and gateway settings is correct.
 - 4) Check that the MAC address is conflicts.
 - 5) Check that 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. If you forget the camera's IP address or password, press the [*] + [#] + [Manual] keys in sequence to restore default settings. After restoring the defaults, you will need to set a strong password again when logging into the web page.

Control

- Remote control does not work
 - 1) Check and replace with new batteries.
 - 2) Ensure that the camera working mode is correct.
 - 3) Ensure that the address key of remote control can match the camera.
- Serial port cannot control
 - 1) Ensure that the protocol, address and bit rate of the camera are consistent.
 - 2) Ensure that the control cable is properly connected.