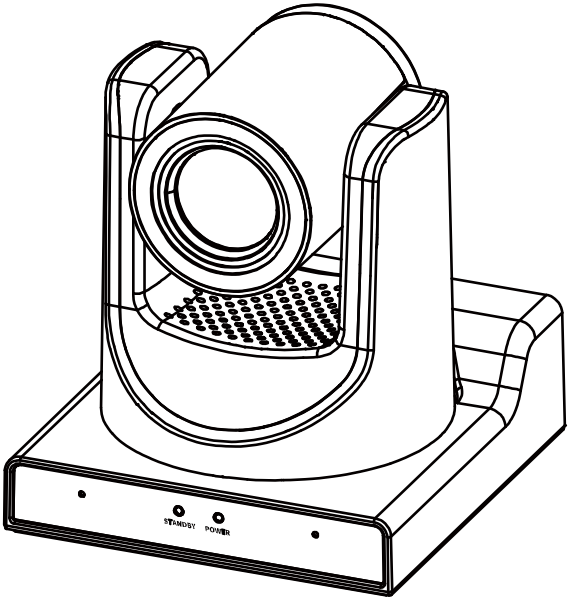
iCam P12U

HD PTZ Camera



User Manual V1.0

www.infobitav.com info@infobitav.com

Copyright

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Notice

Product specifications and information which were referred to in this document are for reference only. We may change, delete, or update any content at any time and without prior 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.

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 Precautions

- 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.
- Please do not connect multiple devices to the same power adapter (exceeding the capacity of the adapter may generate excessive heat or cause a fire).
- 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

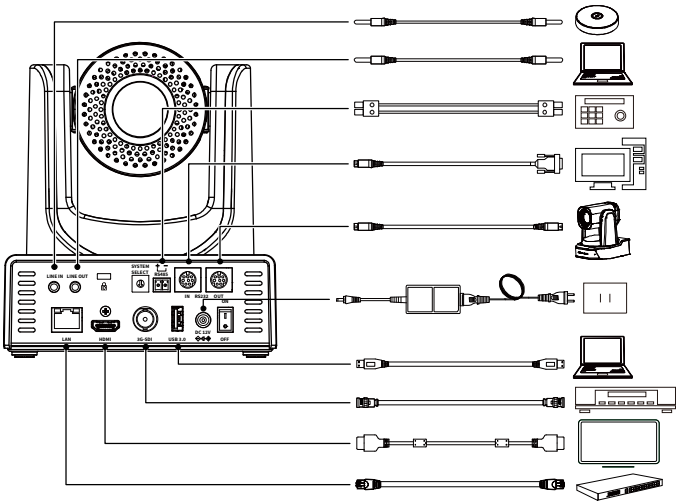
Specific frequencies of electromagnetic field may affect the image of the camera!

2 Packing List

Name	Quantity
Camera	1
Remote Control	1
Power Adapter	1
Power Cable	1
RS232 Cable	1
USB Cable (Optional)	1
User Manual	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 the camera is powered on, it starts to initialize, right up to the limit position, and then both horizontal and vertical go to the middle position, the motor stops running, and the initialization is completed.
(Note: If preset 0 is saved, PTZ will be move to preset 0)

4 Video Format

Video Format			
0	1080P60	8	-
1	1080P50	9	-
2	1080I60	A	1080P59.94
3	1080I50	B	1080I59.94
4	720P60	C	1080P29.97
5	720P50	D	-
6	1080P30	E	-
7	1080P25	F	720P59.94

Notice

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

5 About Product

5.1 Features

- **60.7° Wide-angle Lens + 20x Optical Zoom**

60.7° high-quality ultra-wide-angle lens, optical zoom up to 20x, support 16x digital zoom.

- **1080P Full HD**

Using 1/2.8-inch high-quality HD CMOS sensor with effective 2.07 million pixels, it can achieve high-quality images with a maximum resolution of 1920x1080.

- **New ISP Image Processing Algorithm**

The new generation of ISP image processing algorithm provides more complete white balance and automatic exposure functions, which significantly improves the image output performance of the camera, and the imaging effect is also better. Widely used in education recording and broadcasting, distance education, video conferencing, live broadcasting, broadcasting and other industries.

- **Upgraded AI Technology**

Using upgraded AI technology, through face recognition, it can accurately determine the location of people, realize automatic tracking and automatic frame selection.

- **Leading Auto Focus Technology**

Using advanced focusing algorithm, the lens can focus quickly, accurately and stably.

- **Audio Processing Algorithm**

The exclusive audio processing algorithm can eliminate reverberation, effectively reduce environmental noise, and support EQ adjustment to optimize sound effects; the device supports dual mic pickup, and can also be connected to external microphones, wireless bees, etc., to meet the pickup needs of most scenarios.

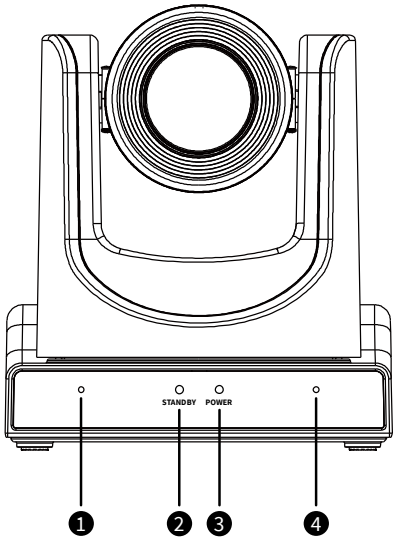
- **Multiple Interfaces**

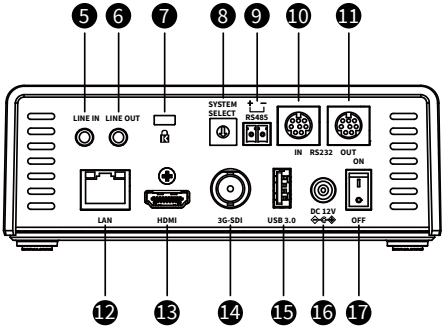
Support HDMI and SDI interface, effective transmission distance of SDI is up to 150 meters (1080P30). HDMI, SDI, LAN can output three HD digital signals at the same time.

- **Remote Control**

Through the RS232 and RS485 serial ports, the camera can be controlled remotely.

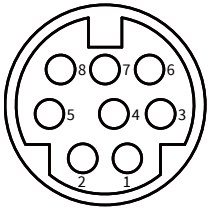
5.2 Interface and Switch





No.	Name
1	Microphone
2	STANDBY Indicator
3	POWER Indicator
4	Microphone
5	LINE IN Interface
6	LINE OUT Interface
7	Security Slot
8	System Select Switch
9	RS485 Interface
10	RS232 IN Interface
11	RS232 OUT Interface
12	LAN Interface
13	HDMI Interface
14	3G-SDI Interface
15	USB 3.0 Interface
16	DC 12V Power Interface
17	Power Switch

5.3 RS232 Interface



No.	Function	No.	Function
1	DTR	5	RXD
2	DSR	6	GND
3	TXD	7	IR OUT
4	GND	8	NC

Correspondence between RS232 and DB-9:

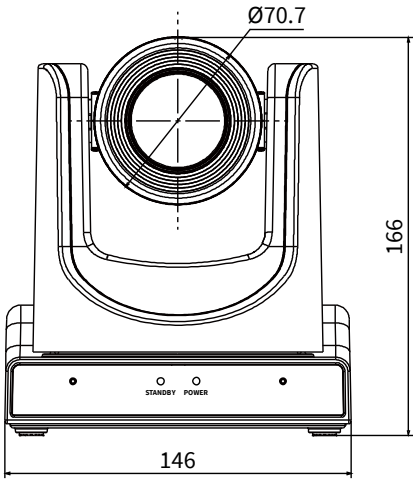
RS232	DB-9
1.DTR	1.CD
2.DSR	2.RXD
3.TXD	3.TXD
4.GND	4.DTR
5.RXD	5.GND
6.GND	6.DSR
7.IR OUT	7.RTS
8.NC	8.CTS
-	9.RI

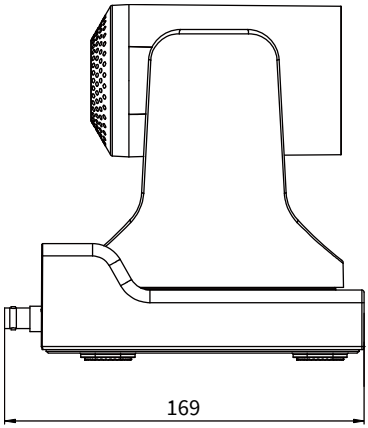
Correspondence between RS232 and Mini DIN:

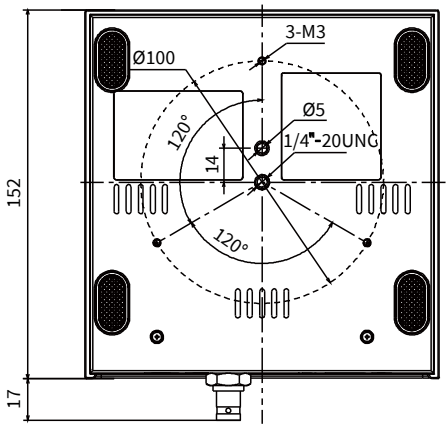
RS232	Mini DIN
1.DTR	1.DTR
2.DSR	2.DSR
3.TXD	3.TXD
4.GND	4.GND
5.RXD	5.RXD
6.GND	6.GND
7.IR OUT	7.NC
8.NC	8.NC

5.4 Dimension

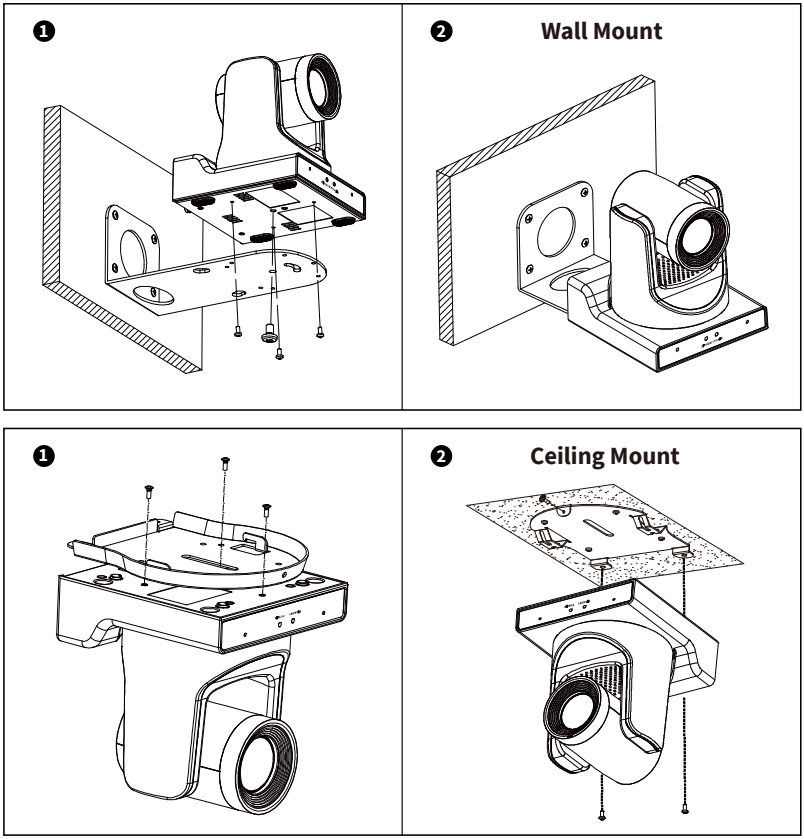
Unit: mm





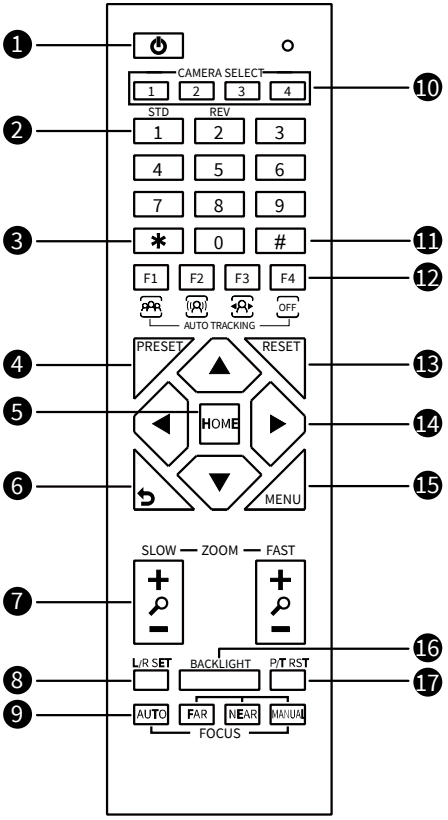


5.5 Installation



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

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/Near focus
10. CAMERA SELECT Keys
Press to select and control the camera
11. # Key
Use with other keys
12. Auto Tracking Keys
[F1]: Disable [F2]: Disable [F3]: Enable AI Tracking [F4]: Disable 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

6 AI Tracking

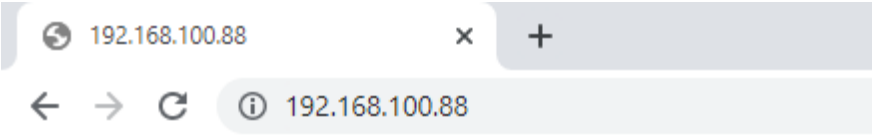
6.1 Web Control

- **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.

The operation steps are as follows:

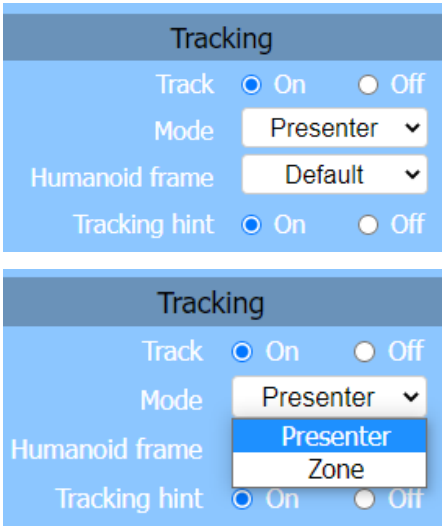
Step 1 Enter the camera's IP address (192.168.100.88) in the browser will bring up the login window. After enter the username (admin) and password (admin), you can log in to the camera's WEB interface.

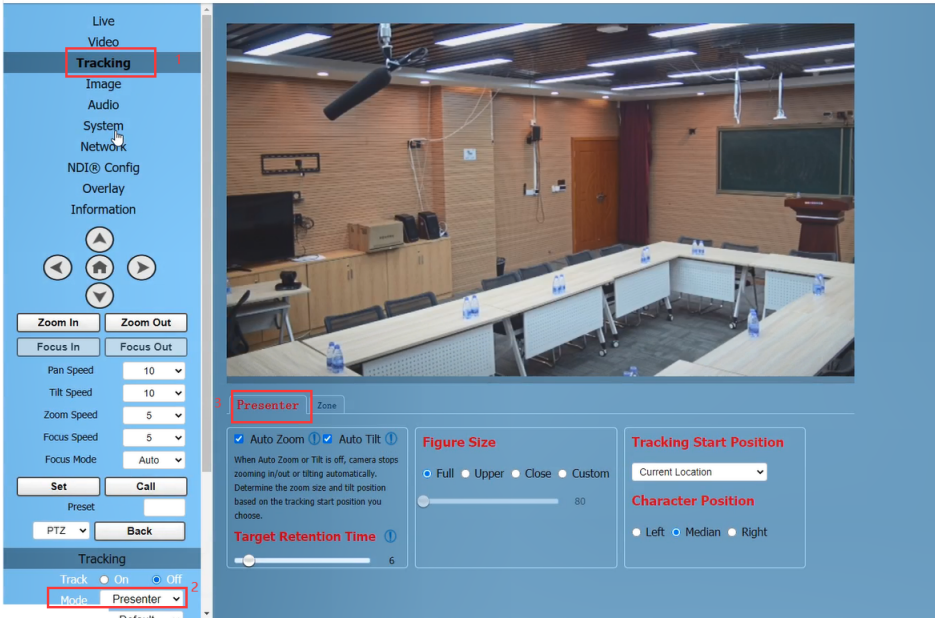


Step 2 Enter the “Tracking” option, select speaker mode “Presenter”, and set the tracking parameters in the “Track Off” state.

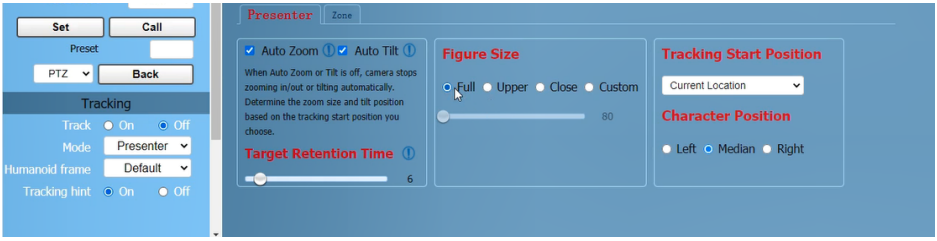
Tracking Mode: Speaker (Presenter)/Area (Zone)

The default is Presenter Mode.





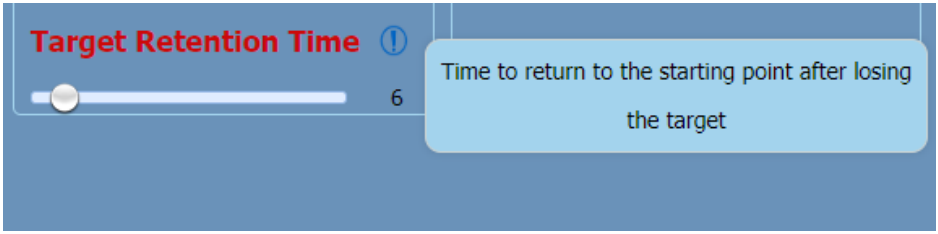
Step 3 We can consider how long the Target Retention Time will take, with a default of 6 seconds and a maximum of 10 seconds.



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 return to the Home position or starting position after the tracking target is lost. The modification here takes effect immediately.



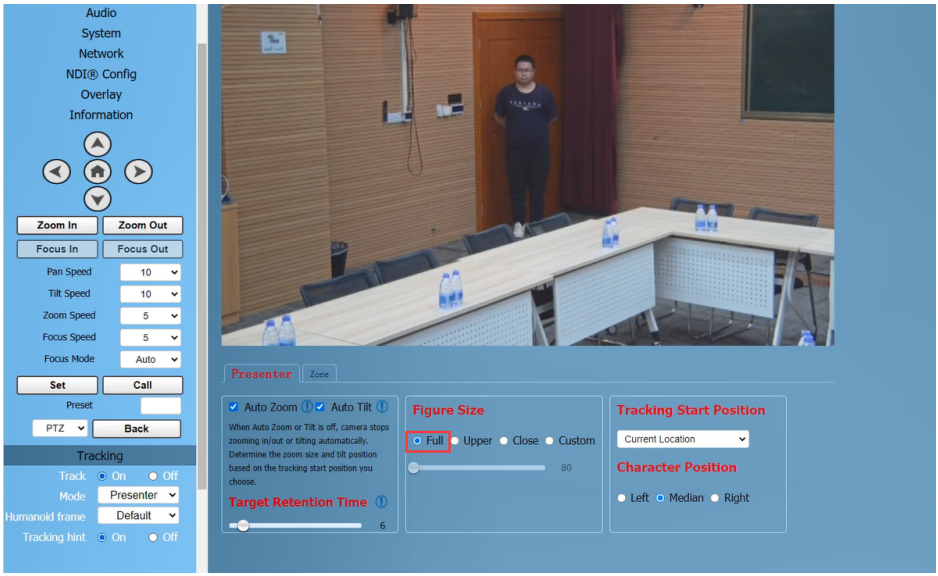


Step 4 Select the desired close-up effect.

- **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.

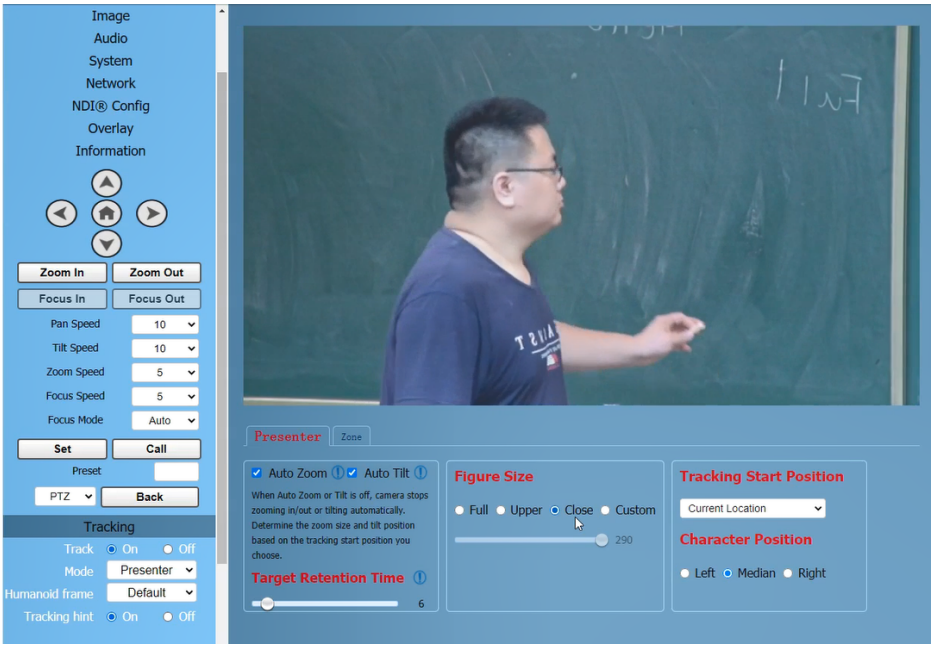
Full: The close-up image includes tracking the entire body of the target, as shown in the following figure.



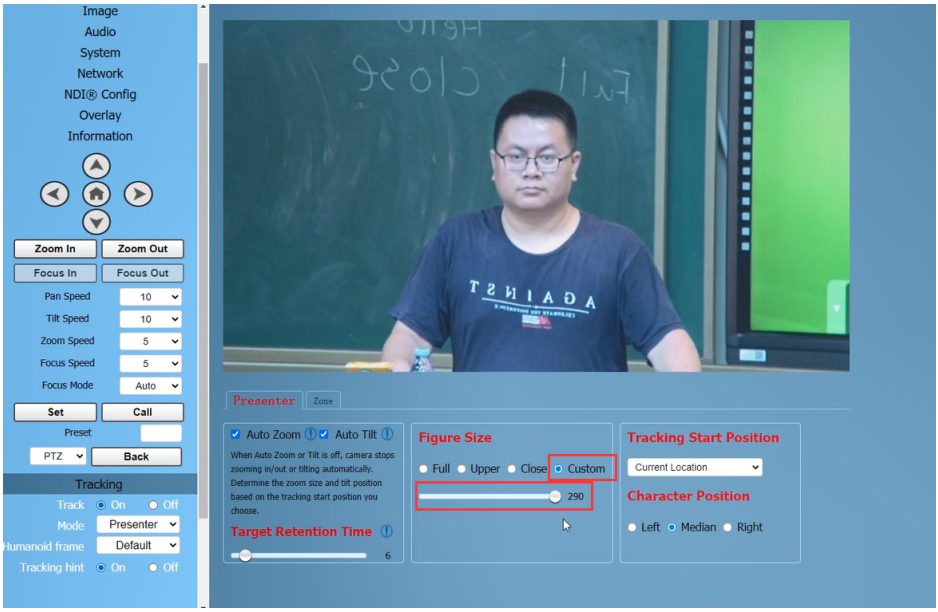
Upper: The close-up image includes tracking the target above the knee, as shown in the following figure.



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



Custom: Adjust the tracking target proportion size.



Note

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.

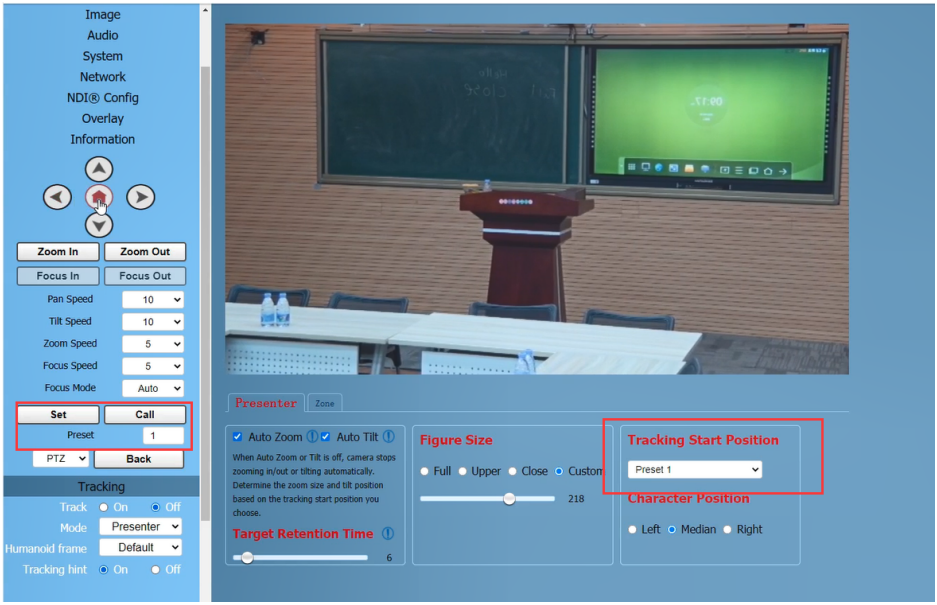
- **Tracking Start Position**

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

Two Mode: Current Location/Preset 1

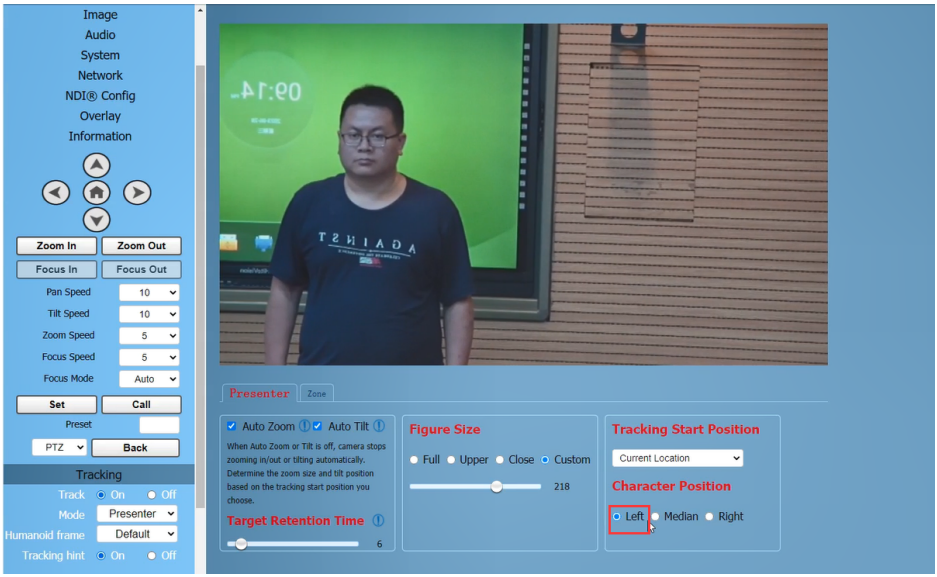
If you choose “Current Location”, the camera position when tracking is turned on is the current position; Similarly, the camera position when stopping tracking will also stop at the current position.

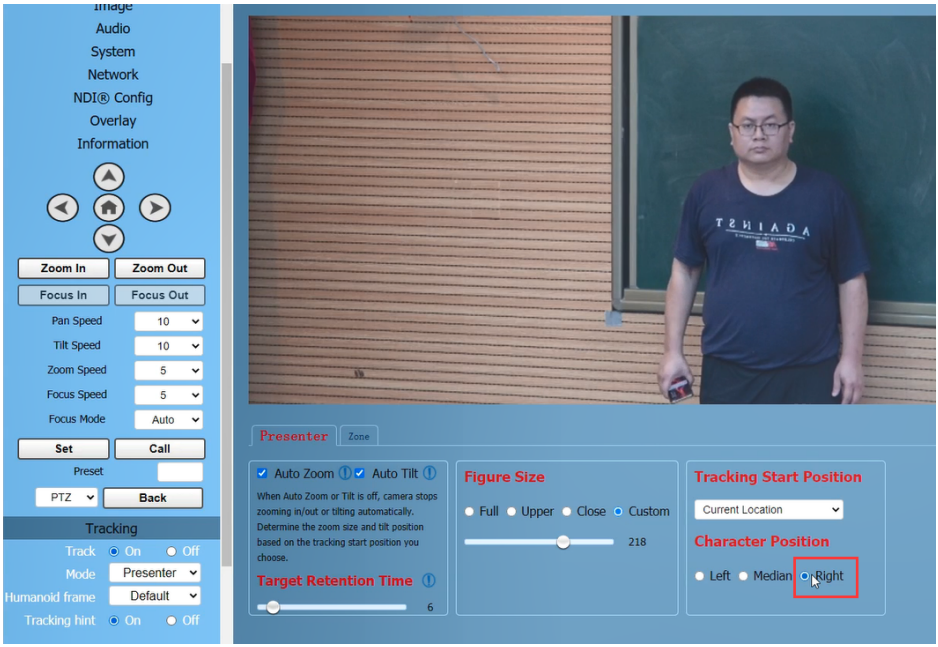
If you choose “Preset 1”, you need to set an additional preset position for the camera. When tracking is turned on, the camera will first move to Preset 1. If someone enters the video screen at this time, the camera will automatically track. When the tracking target is lost (exceeding the timeout), the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

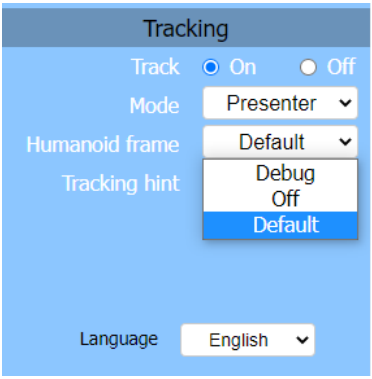
Used in live streaming scenarios, it is often not opened for temporary adjustments during live streaming.

Humanoid frame: Default/Off/Debug

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.

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

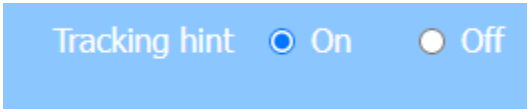
Debug: Turn on tracking, and the humanoid box will always appear on the tracking target. This feature is only applicable for debugging or demonstration.

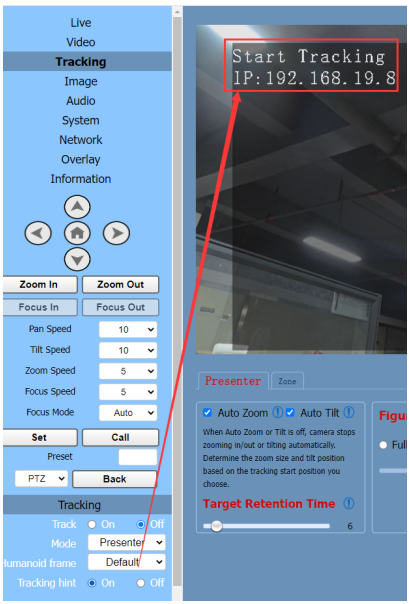


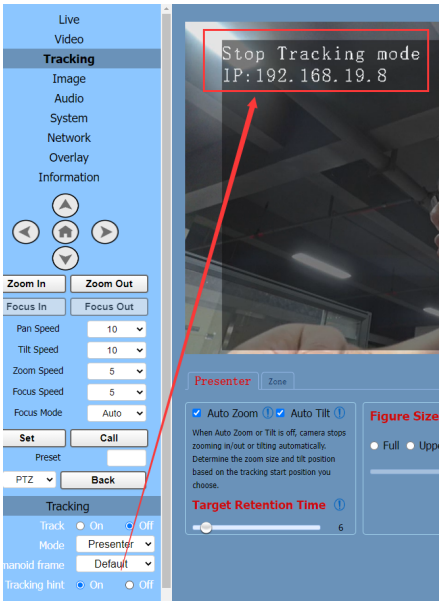
Tracking hint: On/Off

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

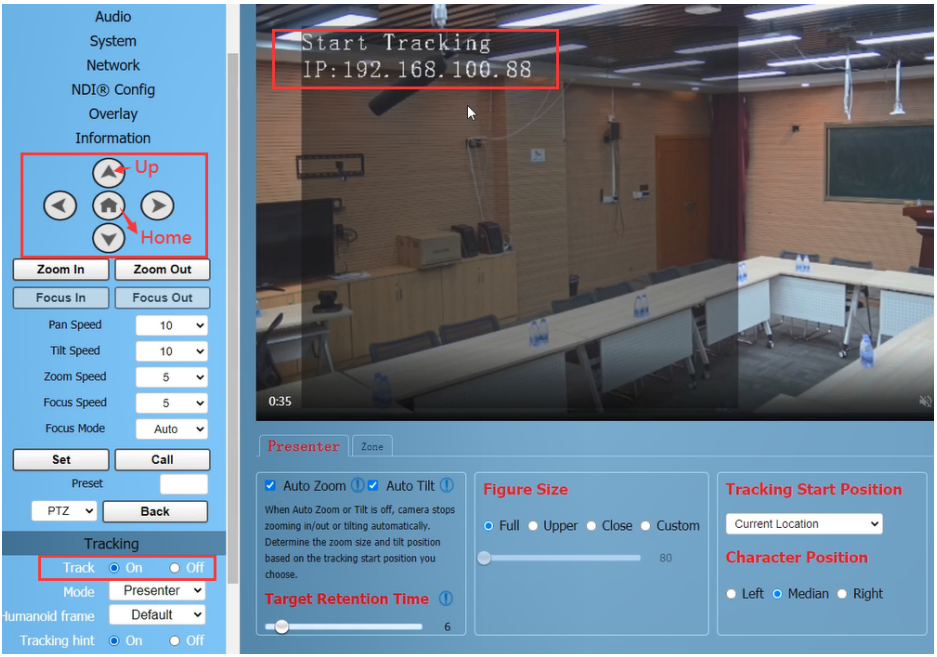
Off: There is no prompt in the upper left corner of the video during switch tracking. This function is also applicable to live streaming scenarios.







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

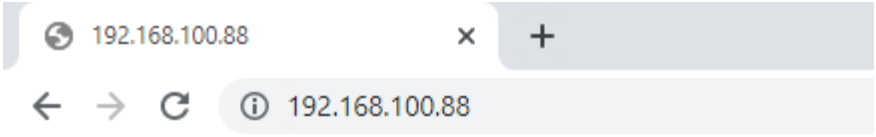


- **Area Tracking (Zone)**

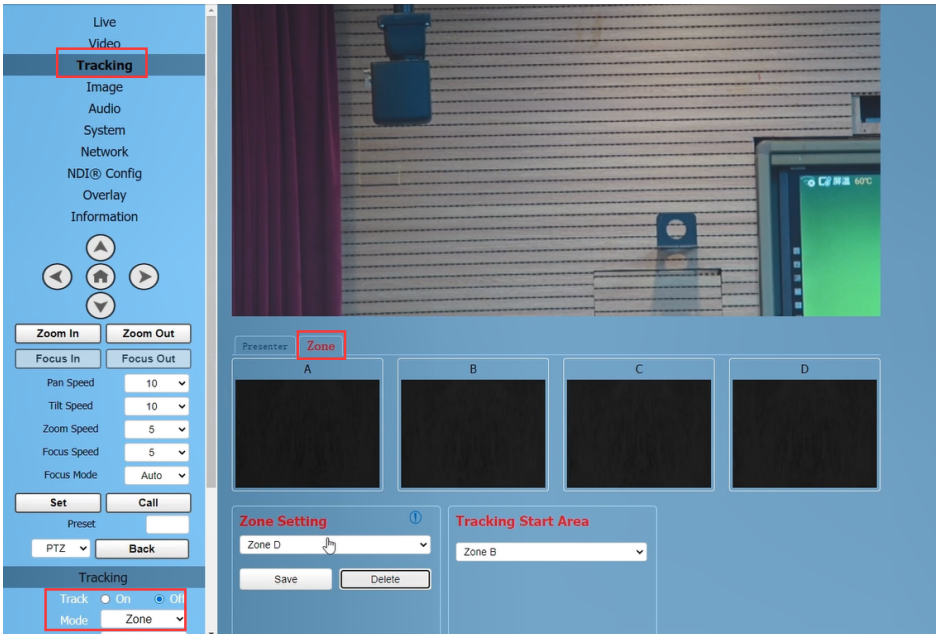
Function: Divide the frequently active areas of the tracking target into several areas (A, B, C, D) as needed, and set corresponding preset positions and save them. When the tracking target enters this area, the camera will automatically call the preset position corresponding to the area to achieve tracking.

Operation Method:

Step 1 Enter the camera's IP address (192.168.100.88) in the browser will bring up the login window. After enter the username (admin) and password (admin), you can log in to the camera's WEB interface.

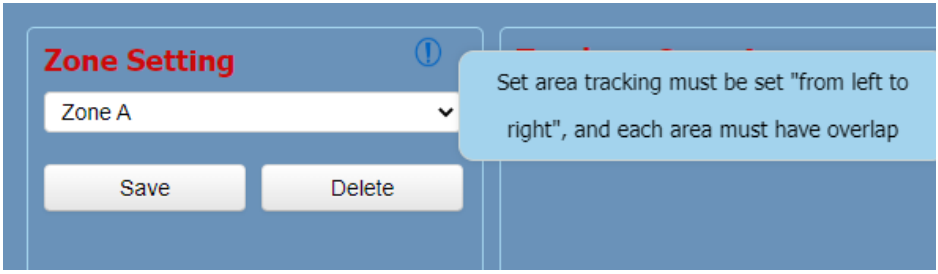


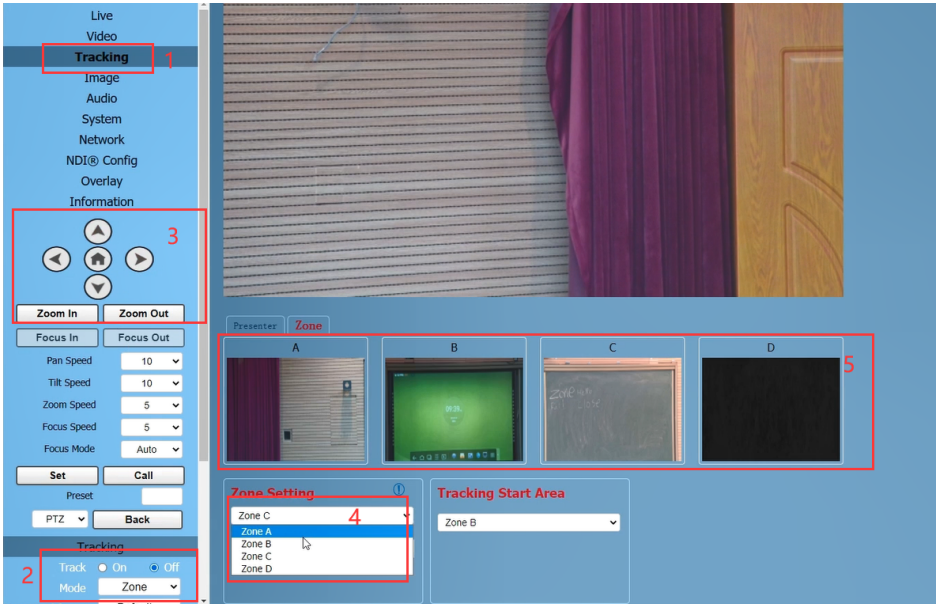
Step 2 Enter the “Tracking” page and select “Zone”. In the track off state, set the tracking parameters.



Step 3 Use the web interface's directional keys and Zoom In/Out to adjust the lens position, and set multiple preset positions such as Zone A successively, and click “Save”.

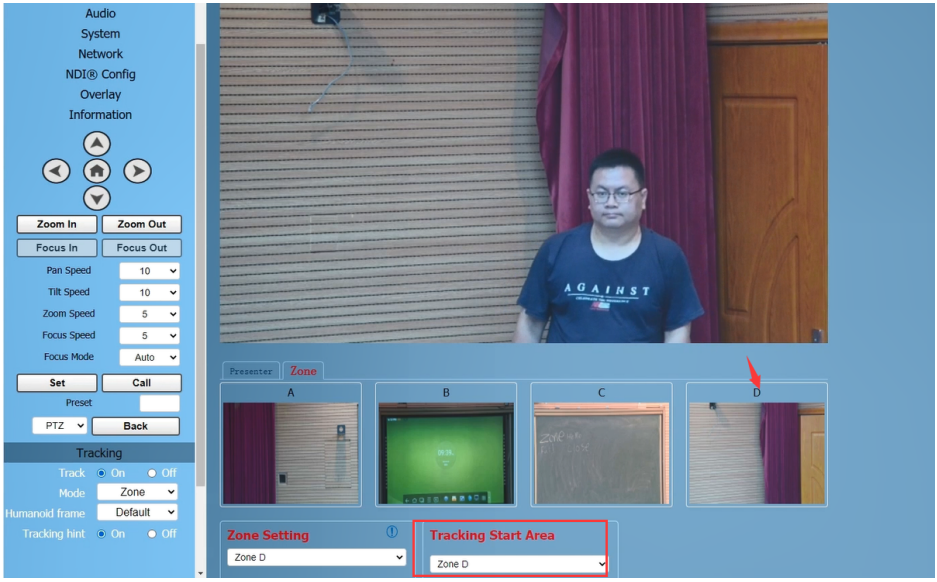
The number of preset positions to be used in actual application scenarios can be considered by users themselves, but currently the maximum is 4. If the settings are incorrect, you can delete or reset them.





- **Tracking Start Area**

Tracking Start Area: You can select any Zone position as the tracking start or end position. When tracking is turned on, the camera will first move to this Zone position. If someone enters the video screen at this time, the camera will automatically track. When the tracking target is lost, the camera will automatically move to this Zone position.

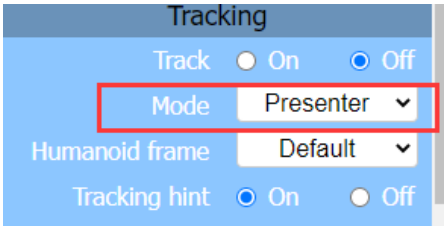




6.2 Remote Control

- **Speaker Tracking (Presenter)**

The camera default is Speaker Tracking (Presenter), which allows you to check the current settings from the web interface.



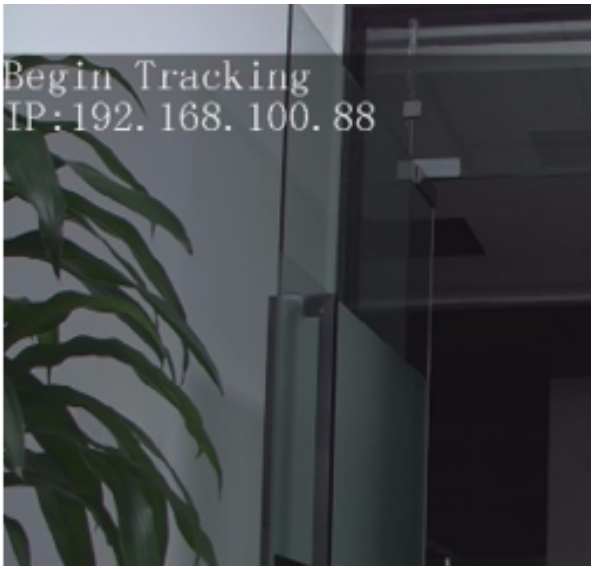
Function: This method can quickly achieve on/off tracking and select tracking targets.

- **Single Person Scenario**

Press the F3 key on the remote control to start tracking, and press F4 key to exit tracking mode.

When there is only one person in the scene, press the F3 key on the remote control to start tracking, and the camera will lock the target for direct tracking. The screen is shown in the following figure, indicating that the tracking program has successfully started. Users can press F4 key to exit tracking mode.





- **Multi Person Scenario**

If there are multiple people in the scene, please first press the F3 key on the remote control to start tracking, if there are multiple people in front of the camera, you can press the left and right key on the remote control to select the target to track, and then press the HOME key to confirm. The camera will start tracking. Users can press F4 key to exit tracking mode.



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 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.

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.