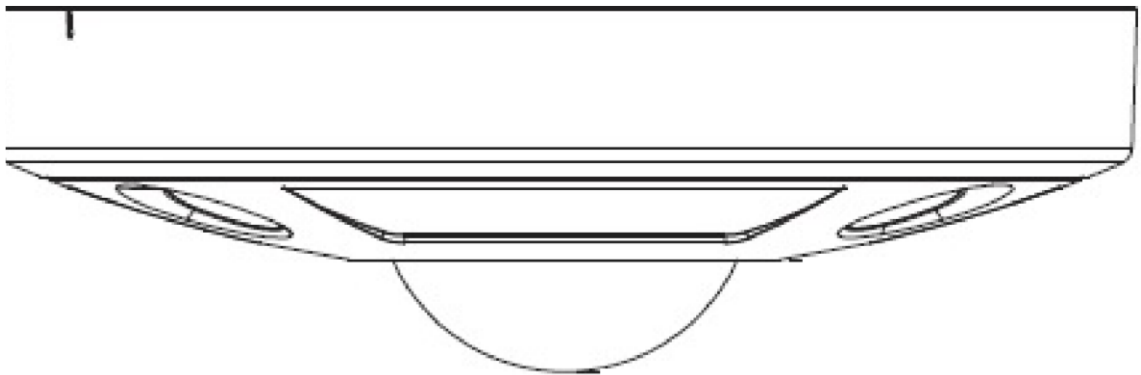


Cameras:

HD-IP

IC REALTIME SECURITY SOLUTIONS

ICIP D720-IRT12: 360 Degree Series IP Camera



Instruction Manual

IC REALTIME SECURITY SOLUTIONS

ICIP D720-IRT12 IP Camera Instruction Manual

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Features and Specifications

This section outlines the primary features of the ICRealtime ICIP D720-IRT12 IP Camera. It also outlines basic Architectural and Engineering specifications.

1.a Overview

This IC Realtime series product is an excellent situational awareness IP Camera designed for the security field. It adopts an embedded Linux operating system to maintain reliable, 24/7 operation. Utilizing both H.264 video compression and G.711/AAC audio compression technology enables the highest quality of recorded audio/video, while maintaining the lowest bitrate utilization.

The ICIP D720-IRT12 support 12 Megapixel with an integrated microphone. This IPC is fully suited for full operation as a standalone device, or can be paired to one of our ICR Network Video Recorders to add a great duration of recorded video.

The high recording resolution and extreme wide angle lens design makes this IPC well equipped for installation in various institutions ranging from residential, commercial, governmental, and enterprise environments.

1.b Features

IC Realtime ICIP D720-IRT12 IP Cameras all support the following features:

- **Real-time Monitoring**

ICIP D720-IRT12 supports 4000*3000 @15FPS (P)/ 4000*3000 @15FPS (N) in Max FPS.

- **Protection**

This product fully supports IK10 and IP66.

- **Secure Archiving**

Audio Video data is compressed and packaged into a secure and proprietary video format (.dav files). This bolsters archived video integrity, and prevents vicious data manipulation. Video is also watermarked with special data for evidentiary purposes.

- **Compression Format**

H.264 video and G.711/AAC audio enables high quality video recording while maintaining the lowest file sizes possible.

- **SD Card Storage**

As a standalone device, the IPC can hold a 64GB micro SD card suitable for storing video direct from the camera.

- **Network Operation**

Full system control (including live view, playback, backup, PTZ control, and system configuration) is available with over the network. Client software is available for both Mac and PC systems.

- **EPTZ Control**

This IPC includes a special de-warping algorithm, enabling users to „Virtually“ Pan/Tilt/Zoom across a high resolution image, in order to get the highest visibility and situational awareness from the camera.

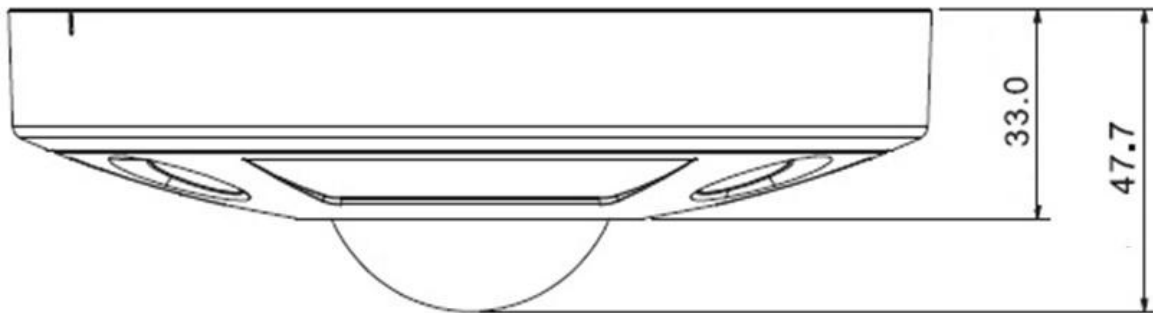
1.c Specifications

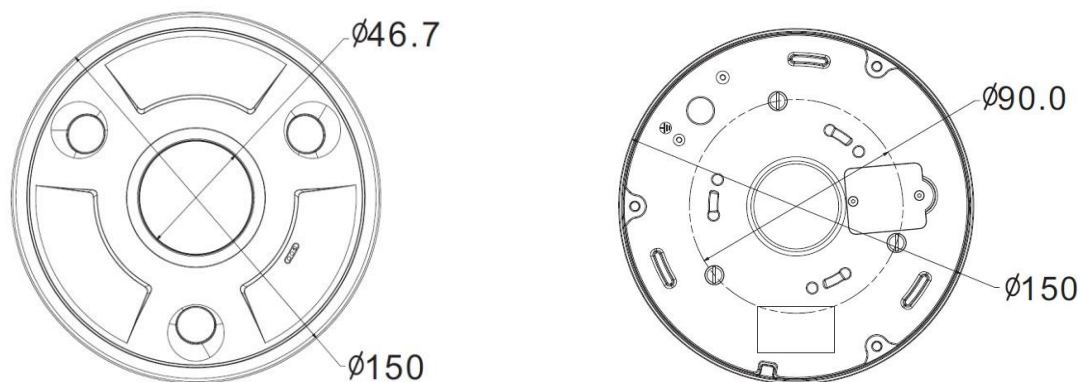
Model	ICIP D720-IRT12 (PAL)	ICIP D720-IRT12 (NTSC)
Camera		
Image Sensor	1/2.3" 12 Megapixel CMOS	
Effective Pixels	4000(H)x3000(V)	
Scanning System	Progressive	
Electronic Shutter Speed	Auto/Manual 1/3~1/30000	Auto/Manual 1/4~1/30000
Min. Illumination	Color: 0. 1LUX/F1.2	
S/N Ratio	>52dB	

Camera Features		
Day/Night		Electromagnetic type IR-CUT, Support day/night mode switch
Backlight Compensation		BLC
White Balance		Auto/ Manual
Gain Control		Auto/Manual
Noise Reduction		3D
Privacy Masking		Up to 4 areas
Lens		
Focal Length		1.55mm
Max Aperture		F2.2
Angle of View		185°/185°/185°
Mount Type		Wall-mount, In-ceiling and bracket
Video		
Compression		H.264/H.264H/H.264B/MJPEG
Resolution		4000*3000 15FPS 2880*2880 20FPS 2880*2160 25FPS 2048*1536 25FPS 4000*3000 15FPS 2880*2880 20FPS 2880*2160 25FPS 2048*1536 30FPS
Frame Rate	Main Stream	4000*3000@15FPS
	Sub Stream	704*576@25fps
Bit Rate		H264:24k~12Mbps, MJPEG:64k~80Mbps
Network		
Ethernet		RJ-45 (10/100/1000 Base-T)
Protocol		HTTP,TCP,ARP,RTSP,RTP,UDP,RTCP,SMTP,FTP,DHCP,DNS,DDNS,PPPOE,IPv4/v6,SNMP,QoS,UpnP,NTP
ONVIF		ONVIF Profile S
Max. User Access		10 users
Smart Phone		iPhone, iPad, Android, Windows Phone
General		
Power Supply		DC12V, PoE(802.3af)

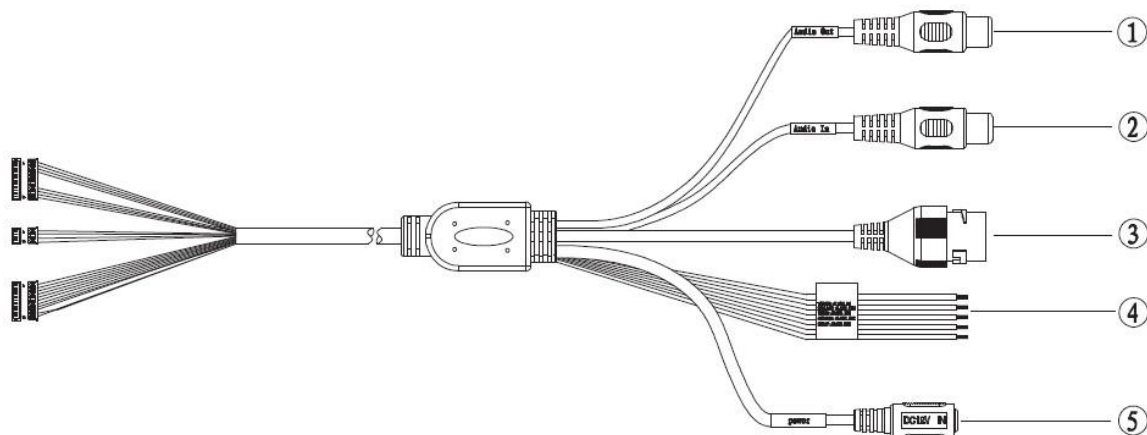
Memory Slot	Micro SD
Power Consumption	<8W
Working Environment	-40°C~+60°C, Humidity≤95%
Dimensions	Φ150×47.7mm
Weight	<1kg
Protection	IK10, IP66

1.d Dimensions





1.e External Cable



NO.	Port	Port Name	Connector	Function Description
1	AUDIO OUT	Audio output port	RCA	Output audio signal to the speakers.
2	AUDIO IN	Audio input port	RCA	Input audio signal, receive the analog audio signal from the sound pick-up.

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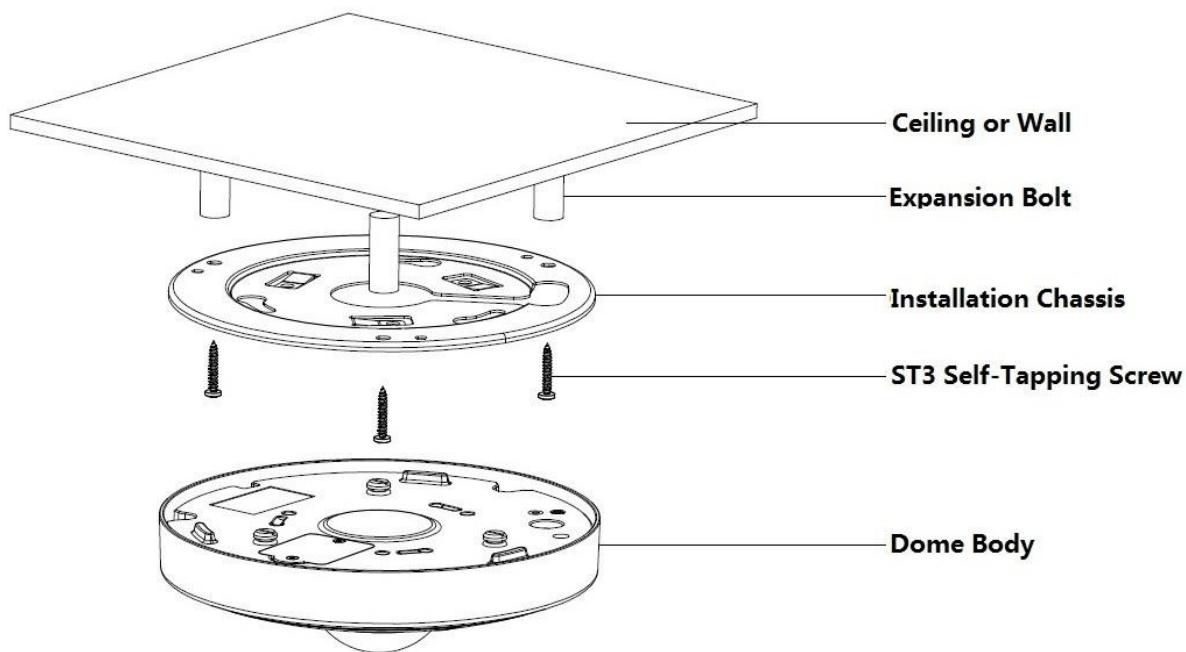
3	LAN	Network port	Ethernet port	Connect to standard Ethernet cable.
4	I/O	I/O port	-	Connect I/O port
5	POWER	Power input port	-	Connect DC 12V power, input power.

Port Name	Cable Number	Cable Port Name	Function Description
I/O port	1	ALARM_NO	<ul style="list-style-type: none"> Alarm output port. It is to output the alarm signal to the alarm device. NO : Normal open alarm output port. This port needs to be used with ALARM_COM port
	2	ALARM_COM	Alarm output public port.
Port Name	Cable Number	Cable Port Name	Function Description
	3	ALARM_IN1	Alarm input port 1. It is to receive the on-off signal from an external alarm source.
	4	ALARM_IN2	Alarm input port 2. It is to receive the on-off signal from an external alarm source.
	5	GND	Ground port

Camera Installation

This section outlines the proper way to mount and install an ICIP D720-IRT12 IP Camera. Suitable methods of installing the IPC include either Ceiling installation, Ground Installation, or Wall installations. Note that hardware including screws and anchors are included for the camera installation.

2.a General Overview



2.b Step by Step Guide

- Step 1: Remove the cameras dome cover

Using the included hex wrench from the accessories kit, unfasten the 3 hex screws on the dome camera enclosure and then remove it.

- **Step 2: Place mounting template**

Included with the camera is a mounting template that can be adhered to the target installation surface for ease of installation. Following the diagram, bore 3 small holes as indicated on the diagram, around the perimeter of the template. Once you've created your holes, insert the plastic anchors securely and firmly.

If you need to pass the cameras cable through the mounting plate, be sure to bore out the template area marked „Cable Exit” to allow for the female RJ-45 plug to pass through.

If you need to pass the cameras cable through the side of the cameras enclosure, be sure to snip out the Ushape knock out in order to allow the cable a wire path.

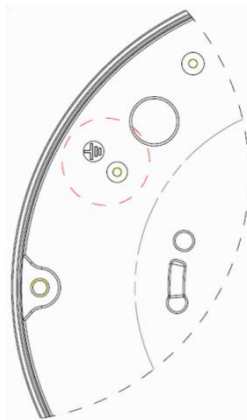
- **Step 3: Mount camera base**

Adjust the cameras base plate, and pull the cable through your exit hole. Match the "TOP" direction of the camera with that from the installation template. Align the 3 base plate holes with the plastic anchors from Step 2. Using (3) ST3.0 self tapping screws from the accessories kit, fix the camera base plate onto the installation surface by screwing the ST3.0 screws through the holes, and into the plastic anchors.

- **Step 4: Replace dome cover**

Lastly, take the dome cover and align it with the base plate that is now fixed to the installation surface. Using the hex key from step 1, replace the 3 hex screws, securing the dome back in place.

Note: If connect the host GND to ground lead, may improve device reliability. The GND locates next to exit hole on the rear side of the chassis and the GND screw is M3.



2.c SD Card Installation

- **Step 1: Disconnect power source from the IP Camera**

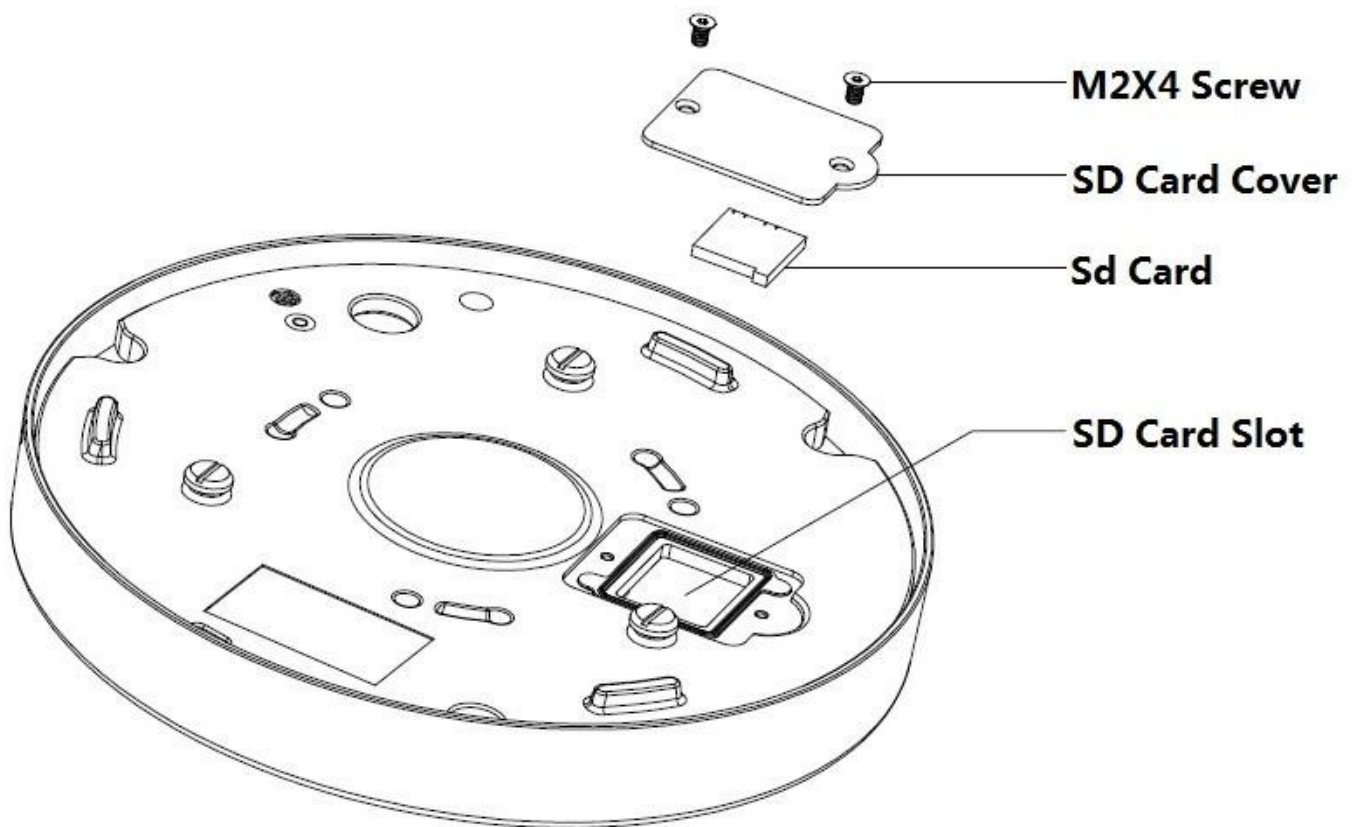
SD cards shall not be installed or removed while the camera is powered and operational. Doing so can potentially result in damage to the camera, and any data stored on the SD card.

- **Step 2: Remove the cameras dome cover**

Using the included hex wrench from the accessories kit, unfasten the 3 hex screws on the dome camera enclosure and then remove it..

- **Step 3: Insert SD card**

Look on the base plate of the camera to see the section labeled “SD Card”. Insert your micro SD card (Pin side down) until it clicks securely into place. At this point you can restore power to the camera, and attach the dome cover again.



Web GUI Operation

This section outlines how to assign an IP address to the camera, and how to access and control the IPC via it's built in Web Interface.

3.a Network Connection

- **Step 1: Ensure the Camera is physically connected to your Network, and Powered ON.**

Patch the IP Camera into your network with a standard Ethernet cable. Provide the camera with power either via PoE or with the separate 12VDC power input jack.

- **Step 2: Assign an IP address to the IP Camera.**

The ICIP D720-IRT12 Series camera (and all ICR IP Cameras) have a factory default static IP address of 192.168.1.108. If this matches the same subnet as your LAN, you will be able to login to the camera by typing this address into your browser (assuming that the IP address does not conflict with another device on your network).

Alternatively, you can use our IP Auto Search utility to rapidly find and change IP addresses for IC Realtime series IP Cameras. The utility is available on our support page at : <http://www.icrealtime.com/docs/IPAutoSearch.zip>

3.b Logging In, and Main Interface

- **Step 1: Open up your Web Browser (Safari, Chrome, Firefox, or IE) and input the IP address of your IP camera.**

In Example, open Safari and browse to <http://192.168.1.108>

- **Step 2: Follow the on screen prompts to install the plugin**

When you first access the IP Camera over your web browser, you will be prompted to install the plugin. See below:

This website wants to install the following add-on: 'IC Realtime LLC' from 'IC Realtime LLC'. If you trust the website and the add-on and want to install it, click here...

Install this add-on for all users on this computer...

What's the risk?

Open desktop

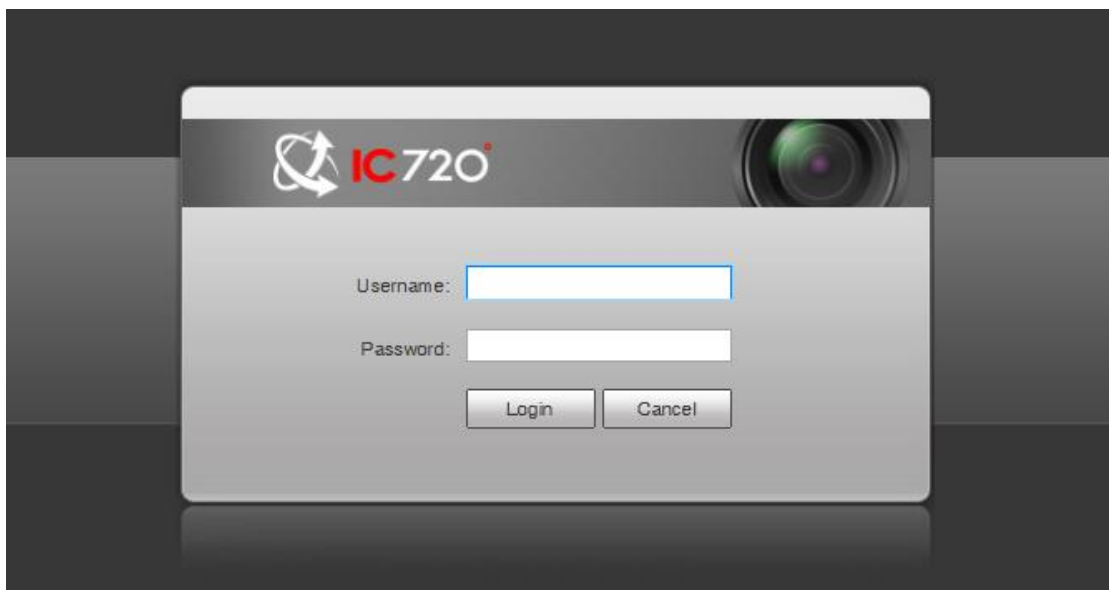
Notification bar Help

Open desktop



- **Step 3: Login to the camera with the default credentials**

By default, the username is „admin“ and the password is „admin“. It is always strongly recommended to change the default passwords after the initial setup. The cameras login page should appear as below:

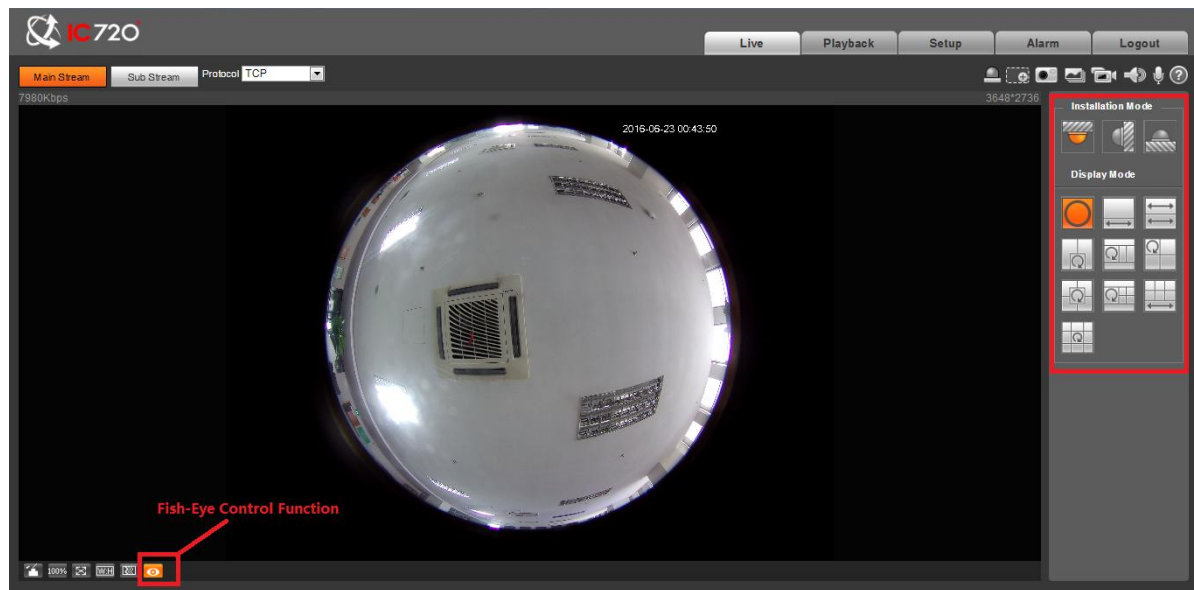


3.c EPTZ Controls

One of the primary features and functions of this series IP Cameras is its virtual Pan/Tilt/Zoom Capabilities. Read on for a step by-step guide on how to control the multiple viewing options of the ICIP D720-IRT12.

- **Before Using the EPTZ function, you must configure the Installation Mode.**

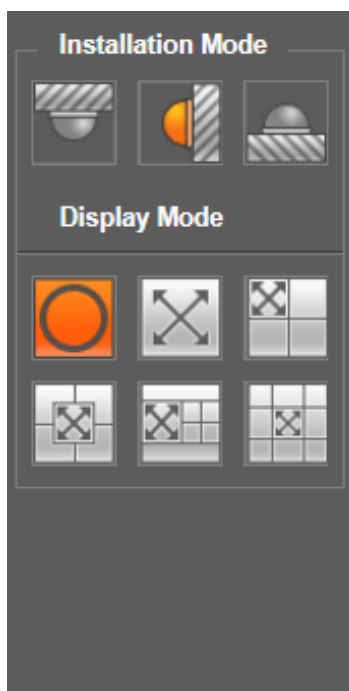
When logged into the camera and click the “fish-eye control function” on the bottom-left of live view window, you’ll see options at the top right to choose the Installation mode. Refer to the image below:



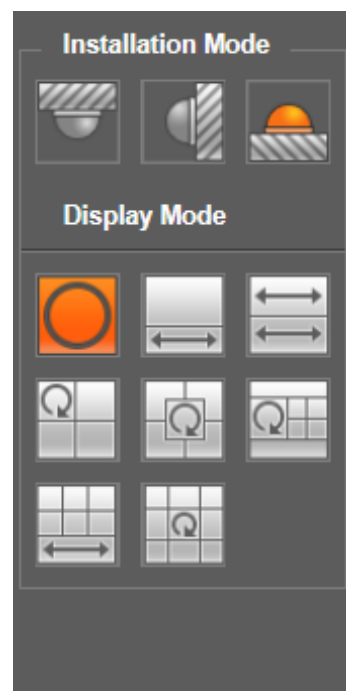
The installation mode has 3 options:




In-ceiling Mount







Wall Mount







Ground Mount



parameter	Note	
Installation Mode	Three modes which are ceiling mount, wall mount and ground mount.	
Display Mode	<p>It represents the display mode of the current image (default supports original image mode), the display modes may be different according to different installation modes. It is shown as follows:</p> <ul style="list-style-type: none"> • Ceiling: 1P+1、2P、1+2、1+3、1+4、1P+6、1+8。 • Wall: 1P、1P+3、1P+4、1P+8。 • Ground: 1P+1、2P、1+3、1+4、1P+6、1+8。 <p>Note: The default displays original image mode when switching installation mode.</p>	
In-ceiling/Wall/Ground	 Original image	It menas the original image without de-warpping


parameter	Note	
In-ceiling/Ground		<p>360° expanded rectangular panorama + independent sub image, the sub image and the subbox in the expanded rectangular panorama support zoom and movement, for the expanded rectangular panorama also supports left and right starting point movement.</p>
		<p>Two related 180° expanded rectangular pictures, two subwindows form 360° panorama anytime, which is also called “dual panorama”. Two expanded rectangular pictures both support left and right movement starting point, which are also linked by each other.</p>

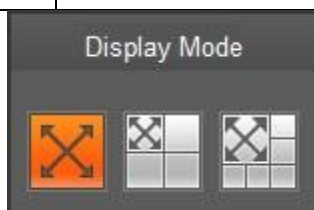
parameter	Note	
		<p>Original image + 2 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation (no such display mode for ground installation).</p>
		<p>Original image + 2 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation</p>

parameter	Note	
	 <p>1+4</p>	<p>Original image + 4 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation</p>
	 <p>1P+6</p>	<p>360°expanded rectangular panorama +6 independent sub image, both the sub image and the subbox in the expanded rectangular panorama support zoom and movement, for the expanded rectangular panorama also supports left and right starting point movement.</p>

parameter	Note	
	 1+8	<p>Original image + 8 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation</p>
Wall	 1P	<p>From left to right 180° expanded rectangular panorama, which supports up and down movement and changes vertical angle of view.</p>




parameter	Note	
	 1P+3	180° expanded rectangular panorama+3 independent sub images, both the sub images and the sub box in the expanded rectangular panorama support zoom and movement, expanded rectangular panorama supports up and down movement and changes vertical angle of view.
	 1P+4	180° expanded rectangular panorama+4 independent sub images, both the sub images and the sub box in the expanded rectangular panorama support zoom and movement, expanded rectangular panorama supports up and down movement and changes vertical angle of view.

parameter	Note	
	 1P+8	180° expanded rectangular panorama+8 independent sub images, both the sub images and the sub box in the expanded rectangular panorama support zoom and movement, expanded rectangular panorama supports up and down movement and changes vertical angle of view.



Enable the trigger track on the interface of tripwire or intrusion, and draw the rule of tripwire or intrusion, the scene of trigger track window will change according to the moving object when it triggers rule alarm until the moving object disappears from the view range of the camera. Please refer to “5.3.4 IVS” for more details about the rules drawing and parameter config of tripwire and intrusion.

Trigger track includes three modes which are 1P, 1P+3 and 1P+5.

-  1P: Original picture
-  1P+3: Original picture and three trigger track windows, it can adjust the location and size of three trigger track windows on the original picture.
-  1P+5: Original picture and five trigger track windows, it can adjust the location and size of five trigger track windows on the original picture.

Appendix: Toxic or Hazard Materials Report

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Circuit Board Component	○	○	○	○	○	○
Device Case	○	○	○	○	○	○
Wire and Cable	○	○	○	○	○	○
Packing Components	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

Note

- This user manual is intended for reference only. Slight differences may be found in the user interface as products continually develop.
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- Please visit <http://www.icrealtime.com> for more information.