

HD live broadcast Camera

User instruction manual
(V1.3)

Precautions

This manual details the function, general principles and methods of installation and use of the equipment. Please read it carefully before installing and using.

1. How to use

To prevent damage to this product or any product connected to it, this product may only be used within the specified limits.

- 1) The camera should not be exposed to rain or moisture;
- 2) Installation and maintenance can only be performed by qualified technicians; Otherwise, there is a risk of electric shock;
- 3) Can only be used in a state of limited temperature, humidity or power supply specifications;
- 4) When cleaning the lens of the device, use a dry soft cloth to wipe, and when the dirt is serious, use a neutral detergent to wipe gently. Do not use strong or corrosive cleaning agents to avoid scratching the lens and affecting the image effect

2. Electrical safety

The installation and use of this equipment must strictly abide by the local electrical safety standards.

3. Transport carefully

During transportation, storage and installation, it is necessary to prevent damage caused by heavy pressure, violent vibration and immersion to the product.

4. Power supply polarity

This product adopts DC 12V power supply or USB direct power supply.

5. Install carefully

- 1) Do not tighten the equipment too much when it is installed on the 1/4 inch screw, which may cause damage to the equipment;
- 2) Do not install the product at an inclined basis when using this product; Otherwise, the picture may be skewed;
- 3) The shell of this product contains ABS material and aluminum alloy material, and it is strictly forbidden to contact with various liquids, gases or solid substances that may cause corrosion of the shell;
- 4) Do not power on until all the installation is completed;

6. Equipment warranty

This product does not have parts that can be repaired by the user, and damage caused by the user's self-disassembly is not covered by the warranty.

7. Magnetic field interference

electromagnetic fields at specific frequencies may affect the image of the unit; This product is a Class A product. Radio interference may be caused in the home environment, and the user needs to take appropriate measures.

1. Quick installation instructions

1.1. Product interface

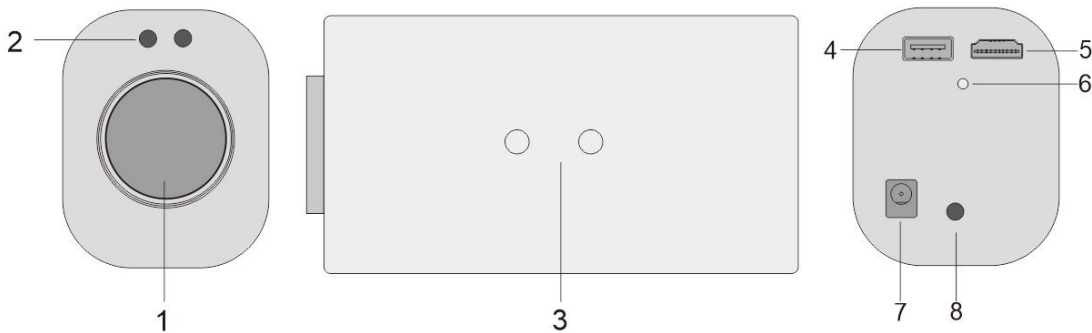


Figure 1.1 Product interface

Interface description:

- | | | |
|--------------------------|--------------------------------------|--|
| 1. Lens | 2. IR remote control receiving light | 3. Tripod fixing hole (1/4 inch screw) |
| 4. USB3.0 interface | 5. HDMI interface | 6. Indicator light |
| 7. DC12V power interface | 8. IR remote control receiving light | |

1.2. Power-on self-test

- 1) Power-on: DC12V power adapter is connected to the power input socket of the device
- 2) Self-test of the whole machine: After power-on, the movement first shrinks and then stretches, the movement returns to the maximum wide-angle position, the device is recognized normally on the computer, and the HDMI has video output, indicating that the self-test is completed.

1.3. Video output

This series of products has a variety of video output methods: USB video output, HDMI video output, network video output, SDI video output;

1) HDMI output

- a) The HDMI video output of the device has a maximum of 1080P 60 frames
- b) Connect the device and display correctly through the HDMI video cable, and the picture can be produced after the device self-test is completed.

2) USB2.0 output

- a) USB2.0 video output supports up to 1080P 30 frames in M-JPEG format
- b) Connect the device and computer correctly through the USB2.0 cable, open the video software and select the image device to plot the picture.
- c) USB2.0 interface comes with serial port, after installing the serial port driver, you can set the full parameters of the camera through the PC-side tool.

3) USB3.0 output

- a) USB3.0 video output supports up to 1080P 60 frames in YUY2 format
- b) Connect the device and computer correctly through the USB3.0 cable, open the video software and select the image device to plot the picture.

2. Product overview

2.1 Product introduction

2.1.1 Dimensions

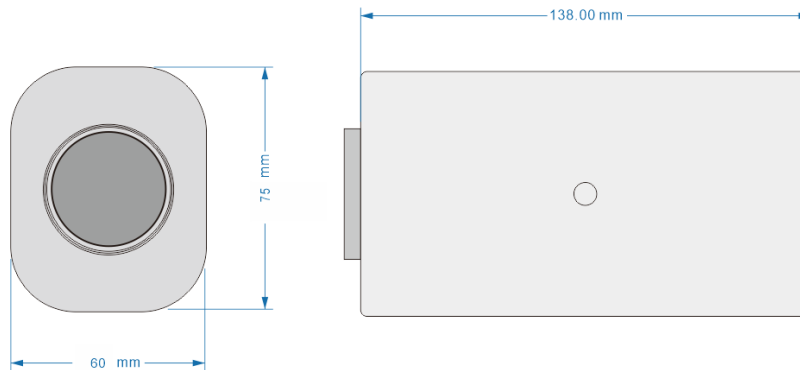


Fig. 2.1.1 Overall dimensions

2.1.2 Random attachments

When opening the package, please check and confirm all the accessories that should be provided, the accessories included with the product are shown in Table 2.1.2:

Table 2.1.2 Product Accessories

Random attachments	Standard	1 product manual
		1 wireless remote control
		1 USB cable
		1 DC12V power adapter

2.2. Product features

This product is a brand new HD camera made for the live broadcast industry. The introduced focusing algorithm is adopted to make the focus faster, more accurate and more stable; Using advanced ISP processing technology and algorithm, the image effect is vivid and realistic, the picture brightness is uniform, the light color gradation is strong, the clarity is high, and the color reproduction is good. The product works stably and reliably, is simple to operate and use, and is convenient for installation and maintenance. Suitable for various live broadcast scenarios.

Product Features:

- **Full HD images:** Using 1/2.8 inch high-quality image sensor, The maximum resolution can reach 1920×1080, and the output frame rate of YUY2 format is up to 60 frames per second, Present clear and realistic HD

videos that vividly show the expressions and movements of your characters.

- **Optical zoom lens:** It adopts a wide-angle lens with large magnification.
- **Rich video interface:** Support HDMI, USB 2.0, USB3.0 and other video output;
- **Leading autofocus technology:** The advanced focusing algorithm is used to make the lens focus quickly, accurately and stably.
- **Portrait and horizontal screens:** Support horizontal and vertical screen installation mode to better meet the playback needs of customers for horizontal and vertical screens.
- **Professional graphic style:** It can well support beauty and jewelry style live broadcast, and adjust the best image effect for the live broadcast scene.
- **Multiple video compression standards:** The interface supports YUY2, MJPG, H264, and video compression formats.
- **Low noise and high signal-to-noise ratio:** The low-noise CMOS effectively ensures the ultra-high signal-to-noise ratio of the camera video; Advanced 2D and 3D noise reduction technology is used to further reduce noise while ensuring image clarity.
- **Easy to use:** No need to download the driver, USB output plug and play, with a convenient and simple user experience;

Technical parameters:

Parameters/models	
Camera, lens parameters	
Image sensor	1/2.8 sensor
Video signal	HDMI output supported video formats: 1080I@60fps, 1080I@50fps, 1080P@30fps, 1080P@25fps, 720P@60fps, 720P@50fps; USB3.0 / USB2.0 output supports video formats: YUY2 1920×1080@60fps MJPEG1920×1080@60fps 1920×1080@30fps, 1280×720@30fps, 1024×576@30fps, 960×540@30fps, 800×448@30fps, 640×360@30fps, 640×480@30fps, 320×176P30fps;
Visual angle	The maximum angle is 72.5 degrees wide
Aperture	F1.5~F3.0
Optical zoom	10X
Minimum illumination	0.1Lux(F1.8, AGC ON)
Digital noise reduction	2D & 3D digital noise reduction
Super automatic noise cancellation	On/off
White balance	Auto/manual/one-touch white balance /3000K/3500K/4000K/4500K/5000K/5500K/6000K/6500K/7000K
Focus	Auto/manual/one-key focus;
Exposure	Automatic/Manual
BLC	On/off
Signal-to-noise ratio	>50dB
Portrait switch	On/off
Minimum object distance	15cm(Wide)~150cm(Narrow)
Interface functional performance	
Video output interface	1 USB3.0 interface: A-port, support YUY2 format 60 frame video output, adaptive 1 HDMI interface: support video output
Video compression	YUY2, MJPG, H.264

format			
Control interface	Remote control		
Other parameters			
Operating voltage and current	voltage	Power adapter	12V
		USB	5V
	current	Power adapter	0.425
		USB	1A(max)
Power consumption	5W(max)		
Storage temperature	-10°C ~+60°C		
Storage humidity	20%~90%		
Operating temperature	-10°C ~+50°C		
Operating humidity	20%~80%		
Dimensions (WxHxD)	68 mm×138 mm×75mm		
Weight	0.6kg		
Usage environment	indoors		
Annex	Instruction manual, warranty card, USB 2.0 cable, power adapter, wireless remote control		

3. Product use

3.1. Use of remote control:

After the camera starts normally, the default device number is A, at this time, press A on the remote control to select the device you need to control, and you can use the remote control to control the camera. The factory's cameras and remote controls are all A by default, and all remote controls and cameras can be controlled. If a remote control wants to control multiple cameras, you need to set the remote control address of the camera in the device menu (there are ABCD) four addresses.

Introduction to the keys

1. Return key

Press the return button to return to the camera lens to the maximum angular position or to return to the previous menu

2. Equipment selection (ABCD)

Select the equipment you need to control, this remote control can control four devices, divided into ABCD; When switching the device you want to control, you need to first select the device number you want to control

3. Number keys

Call preset 0-9;

4. Zoom + Zoom-

Press the zoom+, zoom-button to adjust the zoom and zoom of the camera's focal length;

5. Focus+, Focus-

Press the Focus +, Focus- keys to manually focus the camera

6. Direction control button (U, D, L, R)

Control the camera's menu mode controls the movement of the menu up, down, left and right

7. Menu/confirmation button: enter the menu, confirm the option or enter the next level menu;

8. F1~F4 keys: special function keys

Press F4 to switch automatic/manual focus



9. Add and delete keys

Set the preset position: After adjusting the camera to the corresponding position, press the set preset (add + number key (0-9) to set the preset position of the corresponding number key;

Preset position cancellation: clear the preset position, press delete + number key (0-9) to cancel the preset position of the corresponding number key;

3.2. Menu settings

3.2.1 Main Menu

Display the menu content on the screen and point to the selected item with the scroll arrows.

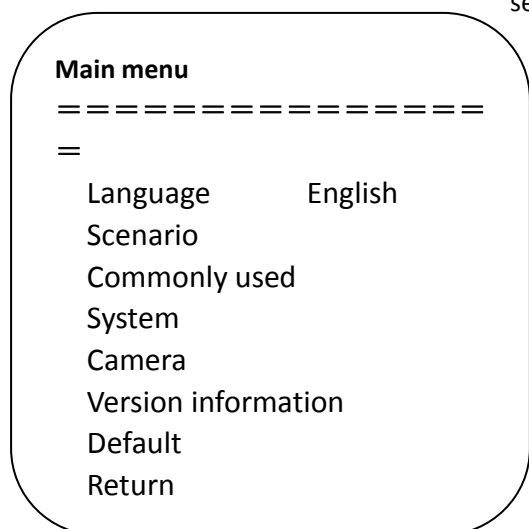
Press [▲ ▼] to move up and down to select the content to be set, Press [◀ ▶] to modify, press [Menu/Confirm] to OK or enter the submenu, Press [HOME] to return. **Note: After modifying the options, you need to press [MEUN] to confirm!**

1) Language: The language setting of the menu

Move the pointer to (Language) in the main menu and press the ◀ ▶ key to modify the language

2) Scene: Select the live broadcast scene

The camera is preset with 4 different styles of scenes, such as default, beauty, jewelry, and clothing. Scene selection is made according to different application scenarios of the camera



3) Common: Several common settings of the camera

White balance, exposure, color, and other settings commonly used by cameras

4) System: the camera's communication protocol and address and other settings

Move the pointer to (System) in the main menu, press the [Menu/Confirm] key to enter the submenu to set the communication protocol and address of the camera;

5) Camera: Set the camera's style, lens, image, exposure, white balance, enhancement, others, etc

Move the pointer to (camera) in the main menu, press the [Menu/Confirm] key to enter the submenu, move the icon up and down, select the camera's parameters and press the [◀ ▶] key to modify, and the modification can be saved after power failure.

6) Version information

Displays information such as the software version of the camera

7) Default Factory reset the camera

4. Maintenance and fault handling

4.1. Product maintenance

- a) If the device is not used for a long time, disconnect the power when not in use.
- b) When removing dust from the device shell, please use a soft cloth or cotton paper to avoid scratches.
- c) When cleaning the lens of the device, use a dry soft cloth to wipe, if the dirt is serious, use a neutral detergent to wipe gently. Do not use strong or corrosive cleaning agents to avoid scratches on the lens and affect the image effect.

4.2. Fault handling

1) No picture for video output

Workaround:

- a) Check whether the USB cable of the device is connected and whether the power indicator is on
- b) Check whether the device is in standby state, long press the power on button for 3s, whether it can be turned on
- c) Restart the device for normal self-test when the power is turned off
- d) Restart the computer to check whether it is normal
- e) Check if the video output cable is normal
- f) Check whether the device is recognized normally, and uninstall the device and reload it when it is displayed in the device manager that it cannot be recognized normally

2) The image is intermittent

Workaround:

- a) Check whether the USB cable is normal
- b) Check whether the USB cable of the device is connected

3) The remote control cannot be controlled

Workaround:

- a) The wireless remote control re-codes with the camera
- b) Whether the remote control address is set to 1 is controllable (if the device is restored to factory defaults, the remote control address is also restored to 1)
- c) Check whether the remote control battery is installed or the battery is insufficient
- d) Check whether the working mode of the device is normal working mode

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