

IFWATER USB4KCAM01H-CFV

IFWATER HDMI 4K USB Camera Instruction Manual

Model: USB4KCAM01H-CFV

INTRODUCTION

The IFWATER HDMI 4K USB Camera is a versatile webcam designed for live streaming, video conferencing, and online teaching. It features a 5-50mm 10X variable focus lens, offering both USB and HDMI simultaneous output for flexible display options. This manual provides detailed instructions for setting up, operating, maintaining, and troubleshooting your camera to ensure optimal performance.

Key Features:

- **HDMI and USB Simultaneous Output:** Power the camera via USB Type-C and connect the USB cable to a PC, while simultaneously connecting an HDMI cable to a TV display. Both TV and PC can display content at the same time. Note: HDMI output is 1080P, while USB 2.0 output is 2160P.
- **10X Optical Zoom Lens:** The 5-50mm manual focus and zoom lens provides 2X digital zoom and 10X optical zoom, totaling 10X zoom for capturing clear, detailed images. It supports Ultra HD 3840x2160 30FPS video output.
- **Efficient Video Formats:** Supports H.264/MJPEG/YUY2, offering up to 50% more compression than H.264. This allows for high-quality video transmission with reduced bandwidth or storage requirements, supporting 3840x2160 MJPEG 30fps/H.264 30fps.
- **UVC Compliant Plug & Play:** Connect the camera to a PC, laptop, Android device, or Raspberry Pi via the USB cable without needing additional drivers. Alternatively, connect directly to a monitor using an HDMI cable for display.
- **Versatile Applications:** Ideal for research, technical projects, hobby applications, and educational settings. Its zoom capabilities are particularly useful for long-distance shooting outdoors, such as recording bird feeding.

WHAT'S IN THE BOX

Please check the package contents upon receipt to ensure all items are present:

- 1x IFWATER USB & HDMI Camera

- 1x User Manual
- 1x USB-C Cable (1.2m)
- 1x HDMI Cable (1.5m)
- 1x Package Box

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Video: Unboxing and overview of the IFWATER HDMI USB Camera, showing the camera, USB-C cable, HDMI cable, and user manual included in the package.

SETUP

Follow these steps to set up your IFWATER HDMI 4K USB Camera:

1. **Unpack the Camera:** Carefully remove the camera and all accessories from the packaging.
2. **Remove Lens Cap:** Take off the protective lens cap from the camera lens.
3. **Mounting (Optional):** The camera is compatible with 1/4" tripods and cantilever brackets. Secure the camera to your preferred mounting accessory if needed.
4. **Connect Power and Data:**
 - **USB Mode:** Connect the USB-C end of the provided USB cable to the camera's Type-C port and the USB-A end to your PC, laptop, Android device, or Raspberry Pi. The camera is UVC compliant, so no additional drivers are typically required.
 - **HDMI Mode:** Connect one end of the provided HDMI cable to the camera's HDMI port and the other end to an HDMI-enabled display (e.g., TV, monitor, projector). Ensure the camera is also powered via the USB-C cable connected to a 5V 2A power source (e.g., power bank, USB wall adapter).
 - **USB + HDMI Simultaneous Output Mode:** Connect both the USB cable to your PC and the HDMI cable to your display. This allows for simultaneous output to both devices.
5. **Power On:** Once connected, the camera should power on automatically.

USB+HDMI Mode



Image: The IFWATER HDMI 4K USB Camera set up in USB+HDMI simultaneous output mode, connected to both a laptop and an external monitor.

Support Type-C&HDMI Simultaneous Output



Image: USB Connection Method diagram, showing how to connect the camera to a monitor and laptop, or just a monitor, or a laptop with external power.

OPERATING INSTRUCTIONS

Operating your IFWATER HDMI 4K USB Camera involves adjusting the lens for focus and zoom, and selecting the appropriate output mode.

- 1. Manual Focus and Zoom:** The camera features a 5-50mm manual variable focus lens. To adjust focus and zoom, gently rotate the rings on the lens barrel. Rotate the focus ring until the image appears sharp. Rotate the zoom ring to adjust the magnification (10X optical zoom). Note that refocusing may be necessary after adjusting the zoom.
- 2. Output Mode Selection:** The camera automatically detects the connected output. If both USB and HDMI are connected, it will output to both simultaneously.
- 3. Software Compatibility:** For USB output, the camera is compatible with standard webcam software on Windows (7/8/9/10/11), Linux (UVC compatible), MAC-OSX (10.4.8 or later), and Android (5.x or above).
- 4. Video Resolution and Frame Rate:** The camera supports Ultra HD 3840x2160 at 30 frames per second (FPS) via USB 2.0. HDMI output is 1080P.



Image: The camera's 10X 5-50mm optical zoom lens capturing detailed views of a church interior.

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Video: Demonstration of the manual adjustable 5-50mm lens, showing the focus and zoom capabilities on text and small objects.

5-50mm Varifocus USB Webcam, 10X Optical Manual Zoom Lens



Image: The camera demonstrating its 10X optical zoom capability in a conference room, highlighting its use for close-up views.

MAINTENANCE

Proper maintenance ensures the longevity and performance of your camera:

- **Cleaning the Lens:** Use a soft, lint-free cloth specifically designed for optical lenses to clean the camera lens. Avoid abrasive materials or harsh chemicals.
- **Cleaning the Body:** Wipe the camera body with a dry, soft cloth. Do not use liquid cleaners directly on the camera.
- **Storage:** When not in use, store the camera in a dry, dust-free environment. Reattach the lens cap to protect the lens.
- **Avoid Extreme Conditions:** Do not expose the camera to extreme temperatures (above 70°C), high humidity, or direct sunlight for extended periods.

TROUBLESHOOTING

If you encounter issues with your camera, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No image or black screen	Loose cable connection, incorrect input selection on display, insufficient power.	Check all cable connections (USB-C, HDMI). Ensure the display is set to the correct input source. Verify the USB-C power source provides 5V 2A.
Image is blurry or out of focus	Lens not properly focused.	Manually adjust the focus ring on the lens until the image is sharp. Refocus after adjusting zoom.

Problem	Possible Cause	Solution
Camera not recognized by PC	USB port issue, operating system incompatibility, software conflict.	Try a different USB port. Ensure your operating system (Windows, Linux, macOS, Android) is supported. Close other applications that might be using the camera. Restart your computer.
HDMI output is 1080P instead of 4K	HDMI output specification.	This is expected behavior. The HDMI output is 1080P, while the USB 2.0 output supports 2160P (4K).
Image quality appears poor	Low light conditions, incorrect software settings, dirty lens.	Ensure adequate lighting. Check camera settings in your software for resolution and compression. Clean the lens.

SPECIFICATIONS

Feature	Detail
Brand	IFWATER
Model Number	USB4KCAM01H-CFV(5-50)
Photo Sensor Technology	CMOS
Video Capture Resolution	4K (USB), 1080P (HDMI)
Effective Still Resolution	8 MP
Maximum Focal Length	50 Millimeters
Minimum Focal Length	5 Millimeters
Optical Zoom	10 x
Digital Zoom	2 x
Focus Type	Manual Focus
Connectivity Technology	HDMI, USB
Supported Image Format	MJPEG, YUY2, H.264
Operating System Compatibility	Win7/Win8/Win9/Win10/Win11, Linux (UVC), MAC-OSX10.4.8+, Android 5.x+
Item Weight	0.53 Kilograms
Upper Temperature Rating	70 Degrees Celsius

PRODUCT SHOW

Camera Dimension:

Unit(mm)	
1	Type-C Port(DC 5V)
2	HDMI Port(DC 5V)
3	Camera tripod
4	The screw to adjust focus
5	The screw to zoom
6	CS 5-50mm 10X Manual Zoom Lens
7	1/4" tripod base
8	Adjust CS mount
9	Adjust the tripod

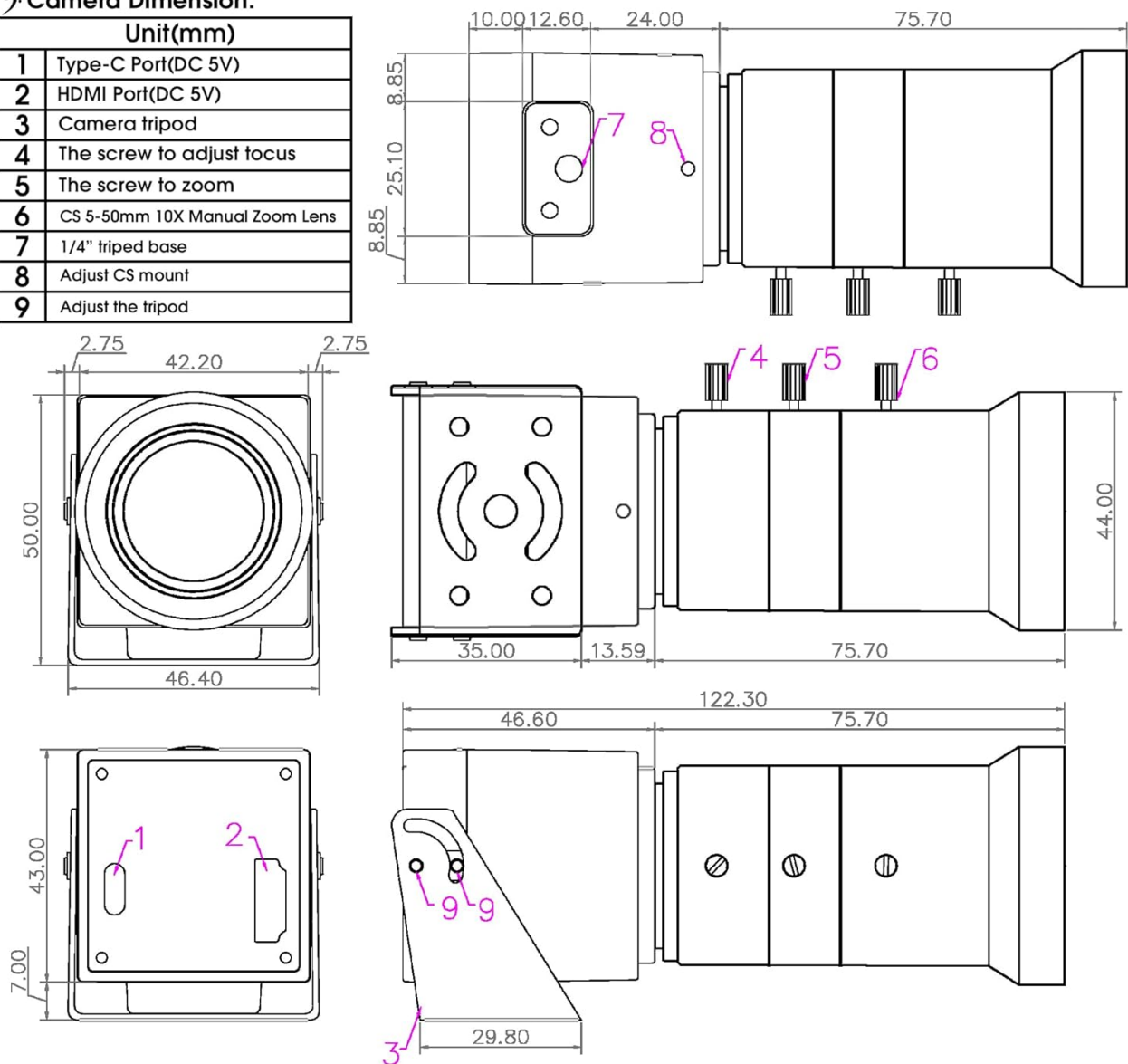


Image: Product dimension diagram, showing various measurements and port locations of the camera.

WARRANTY AND SUPPORT

Warranty: This product comes with a 30-day warranty from the date of purchase. Please retain your proof of purchase for any warranty claims.

Support: For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact IFWATER customer support through the retailer where you purchased the product or visit the official IFWATER store online. Refer to your purchase documentation for specific contact details.