ELP ELP-USB4KCAM06ZF

ELP 12X Zoom 4K 30fps USB Camera Instruction Manual

Model: ELP-USB4KCAM06ZF

1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your ELP 12X Zoom 4K 30fps USB Camera. This camera is designed for high-quality video capture and streaming, featuring dual HDMI and USB outputs, advanced autofocus, and versatile compatibility. Please read this manual thoroughly before using the product to ensure proper functionality and to prevent damage.



Figure 1: ELP 12X Zoom 4K USB Camera

2. Product Overview

2.1 Key Features

- **Dual Output:** Simultaneous USB Type-C and HDMI display.
- **High Resolution:** USB output up to 4K (3840x2160) at 30fps, HDMI output up to 1080P (1920x1080) at 60fps.
- **12X Zoom:** Combines 10X optical zoom and 1.2X digital zoom with manual or automatic adjustment for focus, zoom, and image parameters.
- **Fast Autofocus:** Extreme speed autofocus (approx. 200ms) with 3D noise reduction.
- **Advanced Sensor:** 1/2.8 inch CMOS image sensor with auto focus/manual focus dual switching.
- **Compression Formats:** Supports H.265, H.264, and MJPEG for efficient video streaming.
- **Plug and Play:** UVC compliant, driver-free installation for USB connection.
- **Wide Compatibility:** Supports Windows 7/8.1/10, Mac OS 10.10+, Linux, Android, and various video conferencing software.

- **Versatile Mounting:** Desktop, monitor, wall, tripod, or inverted ceiling mounting options.

2.2 What's in the Box

- 1x ELP 12X Zoom HDMI USB Camera
- 1x User Manual
- 1x USB-Type C Cable
- 1x HDMI Cable



Figure 2: Camera Dimensions and Included Accessories

3. Setup

Follow these steps to set up your ELP 12X Zoom 4K USB Camera:

1. **Mounting:** Position the camera on a stable surface such as a desktop, monitor, or tripod. The camera features 1/4-inch screw threads for tripod mounting. Ensure the camera is securely placed to prevent movement during use.
2. **Power Connection:** The camera is powered via the USB Type-C port. Connect the provided USB-Type C cable to the camera's Type-C port and the other end to your computer's USB port.

3. **USB Connection (for PC/Laptop):** Connect the USB-Type C cable from the camera to your computer. The camera is UVC compliant and driver-free, so it should be automatically recognized by your operating system.
4. **HDMI Connection (for Monitor/TV/Projector):** For direct display on a monitor, TV, or projector, connect the provided HDMI cable from the camera's HDMI port to the HDMI input of your display device.
5. **Dual Output Mode:** The camera supports simultaneous USB and HDMI output. Connect both cables as described above to utilize this feature.

Figure 3: USB + HDMI Dual Output Mode Connection



Figure 4: USB Mode Connection

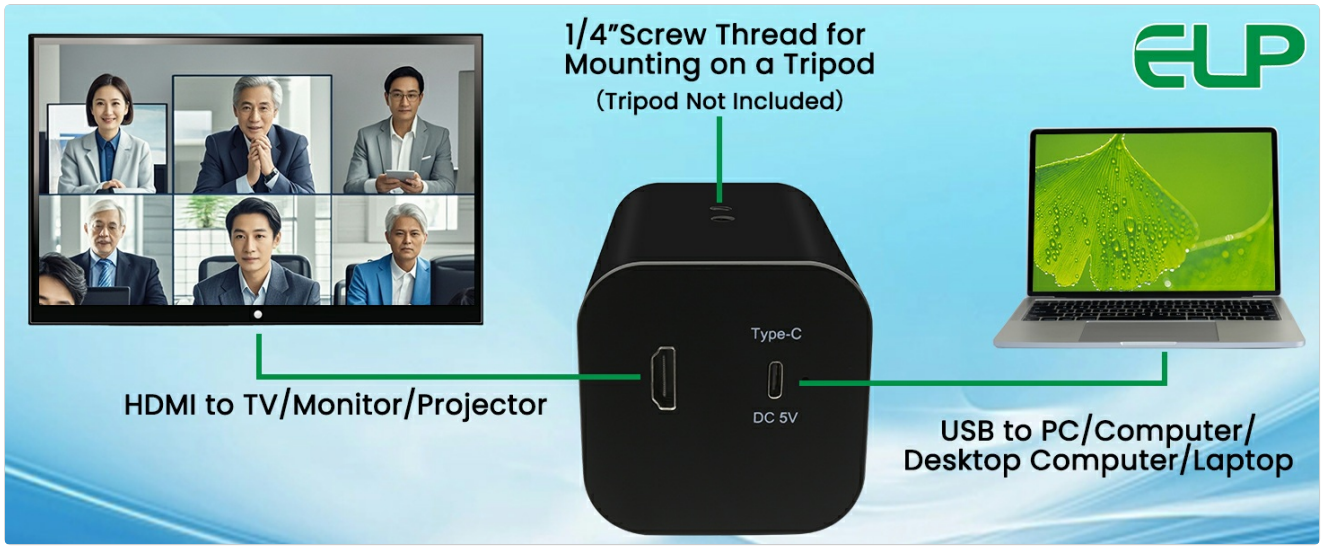


Figure 5: HDMI Mode Connection

4. Operating Instructions

4.1 Initial Use

Once connected, open your preferred video conferencing software (e.g., Zoom, Skype, OBS) or camera application. Select the ELP camera as your video input device. The camera will automatically begin streaming.

4.2 Zoom and Focus Control

The camera features 12X zoom capability (10X optical + 1.2X digital) and both autofocus and manual focus options. Use the included infrared remote control to adjust these settings. The remote allows for precise control over zoom, focus, crispness, saturation, and exposure.

Your browser does not support the video tag. Please update your browser.

Video 1: Demonstration of 12X zoom and HDMI output functionality.

Your browser does not support the video tag. Please update your browser.

Video 2: Demonstration of the camera's autofocus capabilities.



Figure 6: Fast Autofocus with Remote Control

4.3 Image Settings and Scene Switching

The camera supports customized image switching and one-touch image restore. You can also adjust white balance, mirror imaging, and flipping. These settings are accessible via the remote control. Note that when using the menu button on the remote control, only UVC stream or HDMI stream is supported.

Your browser does not support the video tag. Please update your browser.

Video 3: Demonstration of zoom and autofocus in a conference setting.

4.4 Compression Formats

The camera supports H.265, H.264, and MJPEG compression formats. These formats ensure efficient video transmission, especially in low bandwidth conditions, while maintaining image quality.

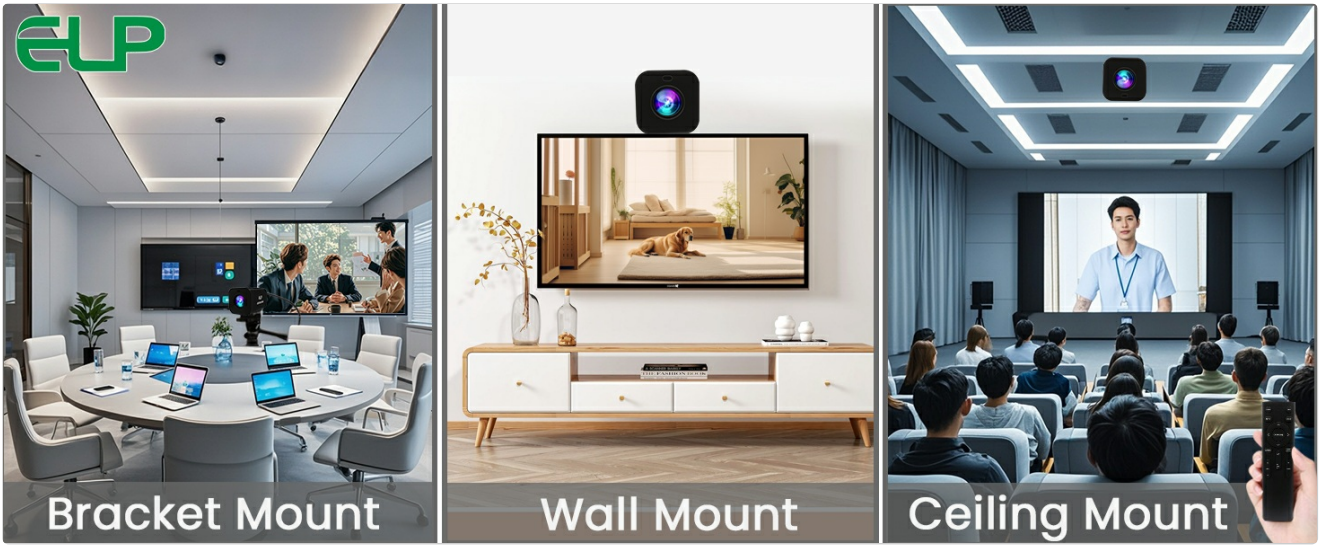


Figure 7: Supported Compression Formats and Resolutions

4.5 Applications

The ELP 12X Zoom 4K USB Camera is suitable for various applications including video conferencing, distance learning, telemedicine, live church broadcasts, online courses, and general live streaming.



Figure 8: Camera Applications



Figure 9: Camera in Use for Online Teaching, Live Streaming, and Video Calls

5. Maintenance

To ensure the longevity and optimal performance of your camera, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the camera body. For the lens, use a specialized lens cleaning cloth and solution. Avoid abrasive materials or harsh chemicals.
- **Storage:** When not in use, store the camera in a cool, dry place away from direct sunlight and extreme temperatures.
- **Cable Care:** Handle cables carefully. Avoid sharp bends or excessive pulling to prevent damage to the connectors and wires.

6. Troubleshooting

If you encounter issues with your ELP 12X Zoom 4K USB Camera, refer to the following troubleshooting tips:

- **No Image/Video Output:**
  - Ensure all cables (USB, HDMI) are securely connected.
  - Verify the camera is selected as the active video input device in your software.
  - Try connecting to a different USB port or HDMI input.
- **Image Noise at Higher Resolutions (2K/4K):**
  - If experiencing noise, particularly at 2K or 4K resolutions, try changing the video format in your software settings to MJPEG. This can often improve clarity.
- **Remote Control Not Responding:**
  - Ensure there are no obstructions between the remote and the camera's IR receiver.
  - Check the remote control's battery.
  - Confirm that the camera is in a mode that supports remote control menu functions (UVC or HDMI stream).
- **No Audio/Microphone Detected:**
  - This camera model does not include a built-in microphone. An external microphone is required for audio input.
- **Difficulty Mounting:**

- The camera is robust and has some weight. For stable positioning, especially on monitors, consider using a dedicated tripod or a sturdy mounting solution. The camera includes 1/4-inch screw threads for compatibility with standard tripods.

7. Specifications

Feature	Specification
Brand	ELP
Model Number	ELP-USB4KCAM06ZF
Photo Sensor Technology	CMOS
Video Capture Resolution	1080p, 4K
Maximum Focal Length	200 meters
Connectivity Technology	HDMI, USB
Special Feature	10X optical zoom + 1.2X digital zoom, UVC compliant, H.265/H.264/MJPEGYUY2, HDMI USB dual output, Auto Focus/Manual Focus Dual Switching
Photo Sensor Size	1/2.8-inch
Operating System Compatibility	ANDROID, UBUNTU, CHROME OS, Linux with UVC, Mac-OS X 10.4.8 or later, Raspberry Pi, WinXP/Vista/WIN7/WIN8/WIN9/WIN10/WIN11
Minimum Focal Length	20 millimeters
Lens Type	Zoom
Focus Type	Auto Focus, Manual Focus
Viewing Angle	72 degrees
Optical Zoom	1.2 x
Item Dimensions (D x W x H)	4.09"D x 2.62"W x 2.62"H
Effective Still Resolution	8 MP
Image Capture Speed	60 frames_per_second
Supported Image Format	H.264, H.265, MJPEG

Feature	Specification
Exposure Control Type	Automatic, Manual
Compatible Devices	Laptop, Personal Computer, Smartphone, TV, monitor, projector, Tablet

8. Warranty and Support

Your ELP 12X Zoom 4K USB Camera comes with the following warranty:

- 30 days free return and replacements
- 90 days free repair
- 1 year guarantee

For technical support or warranty claims, please contact the manufacturer, ELP, through their official support channels.