ELP ELP-USB4KHDR01-L36

ELP 4K USB Camera Instruction Manual

Model: ELP-USB4KHDR01-L36

Brand: ELP

1. Product Overview

The ELP 4K USB Camera module (Model ELP-USB4KHDR01-L36) is a high-resolution imaging device designed for various applications, including computer vision, surveillance, and embedded systems. It features a 4K IMX317 sensor, a 3.6mm fixed-focus lens, and dual built-in microphones for audio capture.

- **High Quality Imaging:** Utilizes a 4K 1/2.5” IMX317 sensor for sharp images and accurate color reproduction, with a maximum still picture resolution of 3840x2160.
- **Wide Angle Lens:** Equipped with a 3.6mm M12 lens and IR filter, providing a wide field of view (Horizontal: 93°, Vertical: 51°). The focus is manually adjustable.
- **Integrated Audio:** Features dual built-in microphones for audio recording, suitable for applications requiring sound capture.
- **Plug & Play:** UVC compliant, requiring no additional drivers for installation. Simply connect the camera to a PC, laptop, Android device, or Raspberry Pi using the included USB cable.
- **Versatile Applications:** Ideal for home surveillance, 3D printer monitoring, object recognition and tracking, biometric scanning, casino games, KIOSK systems, and other machine vision applications demanding high resolution.

2. What's in the Box

- ELP 4K USB Camera Module (ELP-USB4KHDR01-L36)
- USB Cable

3. Setup Instructions

3.1 Connecting the Camera

The ELP 4K USB Camera is designed for easy plug-and-play functionality. No specific drivers are required for most

operating systems (Windows, Linux, Mac, Android).

1. Connect one end of the provided USB cable to the camera module's 4-pin 2.0mm connector.
2. Connect the other end of the USB cable to an available USB port on your computer, laptop, Raspberry Pi, or compatible Android device.

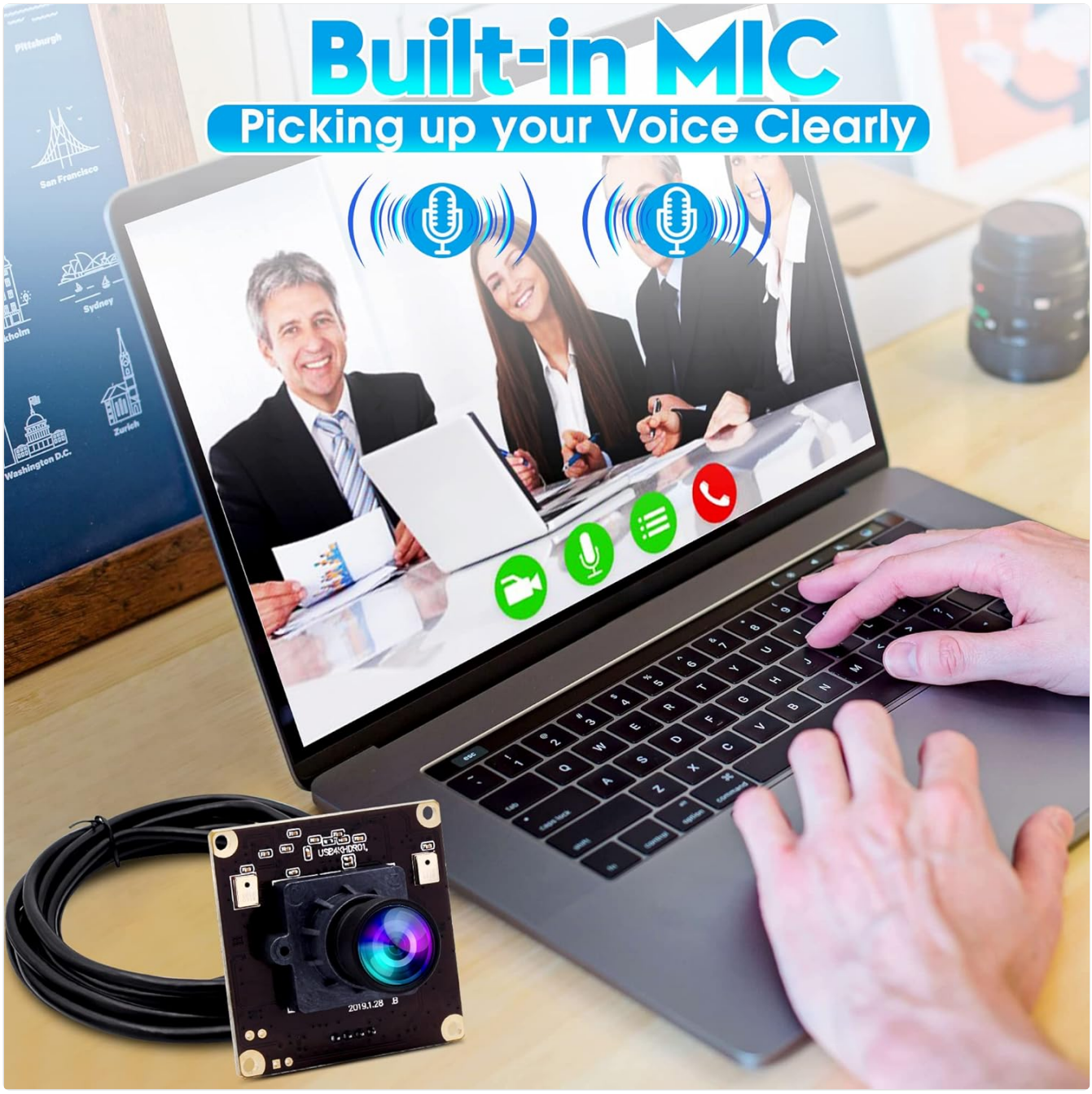

Image: ELP 4K USB Camera module connected to a laptop, demonstrating its built-in microphone capabilities.

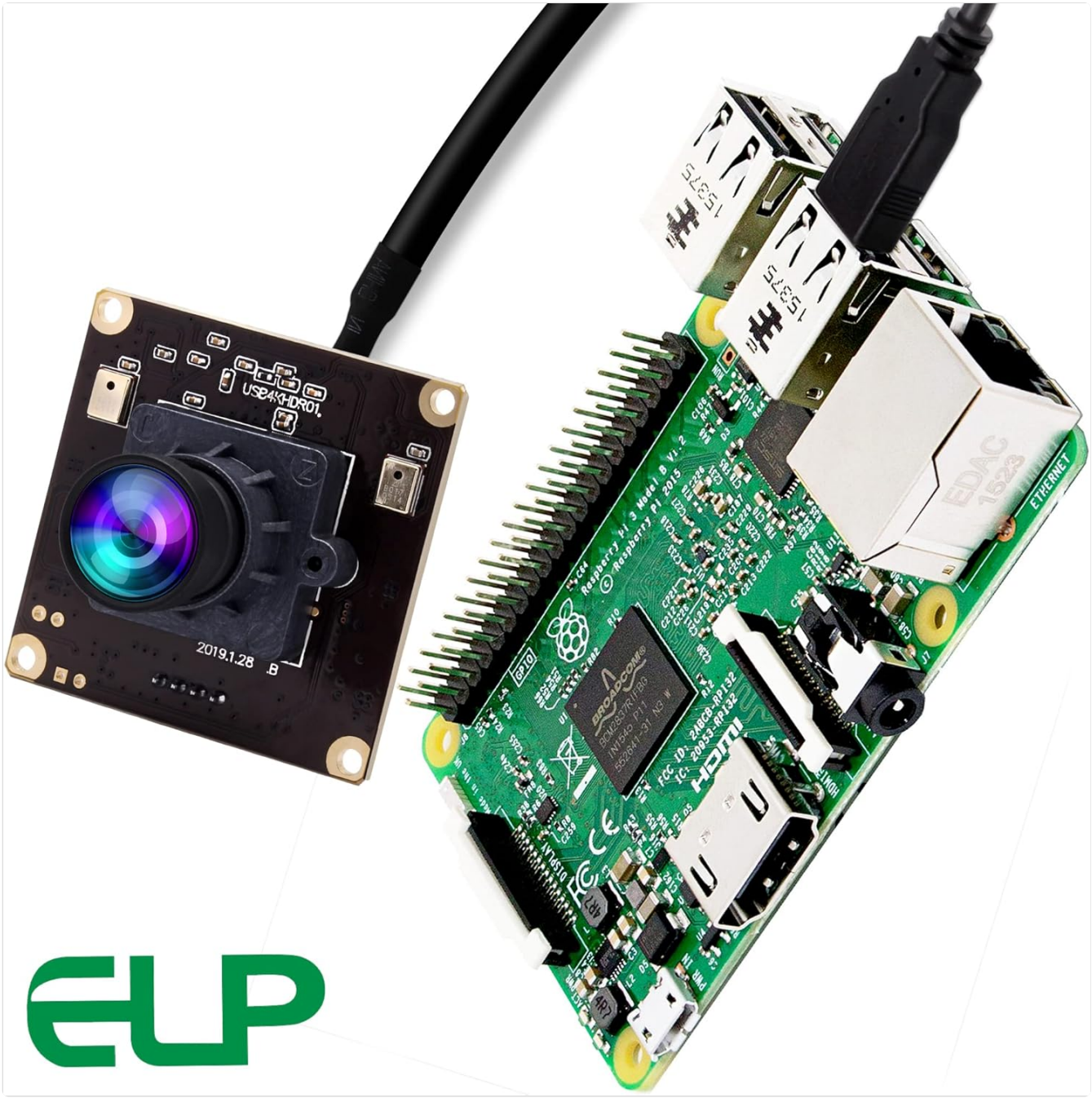

Image: The ELP 4K USB Camera module connected to a Raspberry Pi board, showcasing its compatibility with embedded systems.

Video: This video demonstrates the plug-and-play functionality of the ELP 4K USB camera module when connecting to a computer or laptop.

3.2 Initial Software Setup (e.g., Amcap)

Once connected, the camera should be recognized by your operating system. You can use standard webcam software or a dedicated application like Amcap for advanced settings.

1. Open your preferred camera software (e.g., Amcap on Windows).
2. Navigate to the 'Devices' menu and select 'HD USB Camera' or similar entry for your ELP camera.
3. Go to 'Options' and select 'Preview' to view the live feed from the camera.

Video: This video illustrates the unboxing, connection, and initial setup of the camera using Amcap software, including previewing the feed and selecting resolution.

4. Operating Instructions

4.1 Adjusting Resolution and Compression

The camera supports various resolutions and compression formats. You can adjust these settings within your camera software to suit your needs.

1. In your camera software (e.g., Amcap), go to 'Options' and then 'Video Capture Filter' or 'Video Capture Pin'.
2. Select your desired resolution (e.g., 3840x2160 for 4K) and compression format (MJPEG or YUY2).
3. Apply the changes to update the video stream.

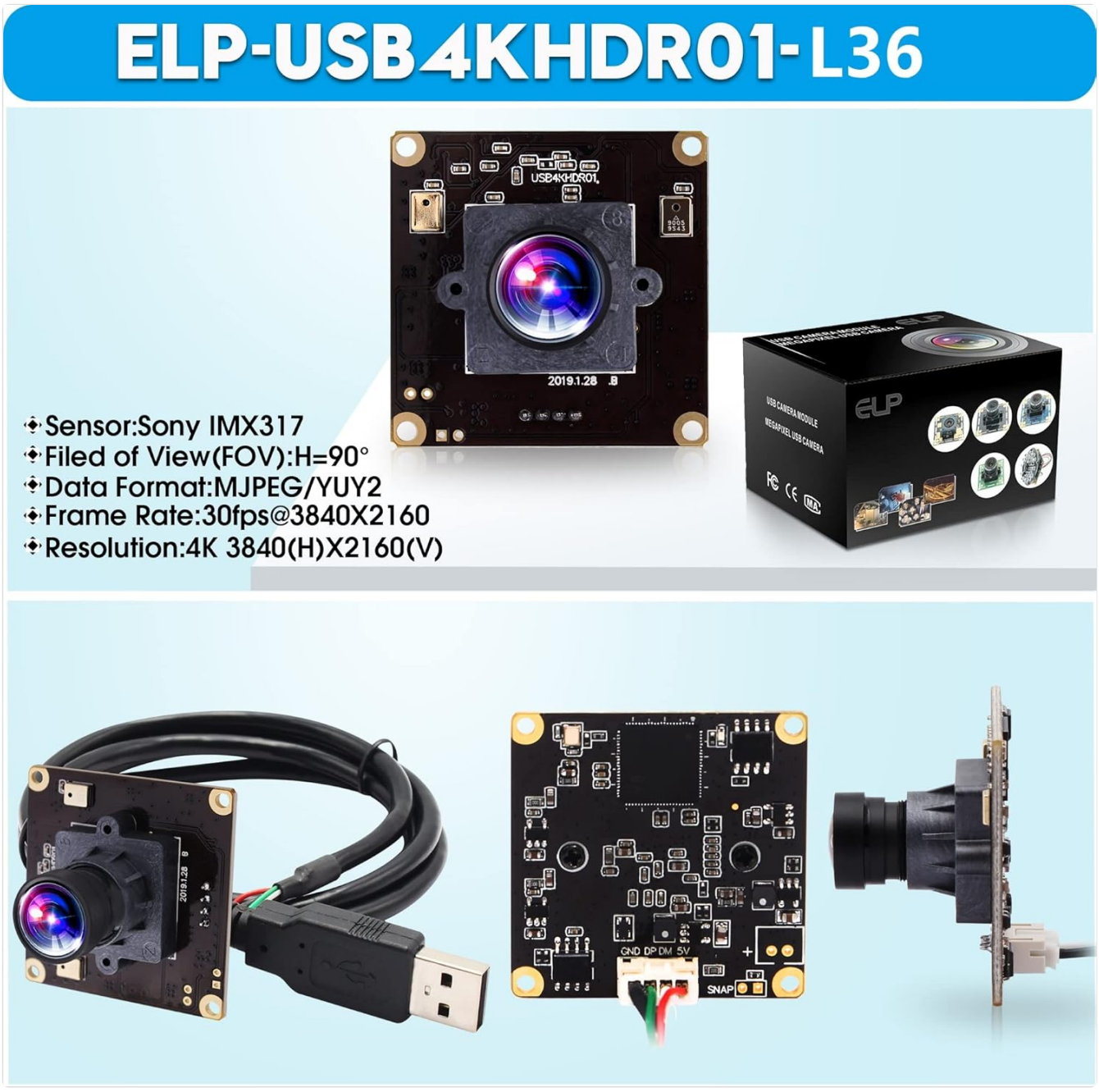

Image: Detailed specifications of the ELP-USB4KHDR01-L36 camera module, including supported resolutions and frame rates.

4.2 Manual Focus Adjustment

The 3.6mm lens on this camera module is manually focused. To achieve optimal image clarity, you will need to physically adjust the lens.

1. While viewing the live feed in your camera software, gently twist the lens barrel on the camera module.
2. Rotate the lens clockwise or counter-clockwise until the image on your screen appears sharp and clear.
3. Once focused, ensure the lens is securely in place to maintain clarity.

Video: This video demonstrates the process of manually adjusting the focus of an ELP 4K IMX317 USB camera for optimal image clarity.

4.3 Parameter Adjustment

You can fine-tune various image parameters to optimize the camera's performance for specific lighting conditions or application requirements.

- Access the 'Video Capture Filter' or 'Video Capture Pin' settings in your software.
- Adjust parameters such as Brightness, Contrast, Hue, Saturation, Sharpness, Gamma, White Balance, Backlight Contrast, Gain, Frequency, and Exposure as needed.

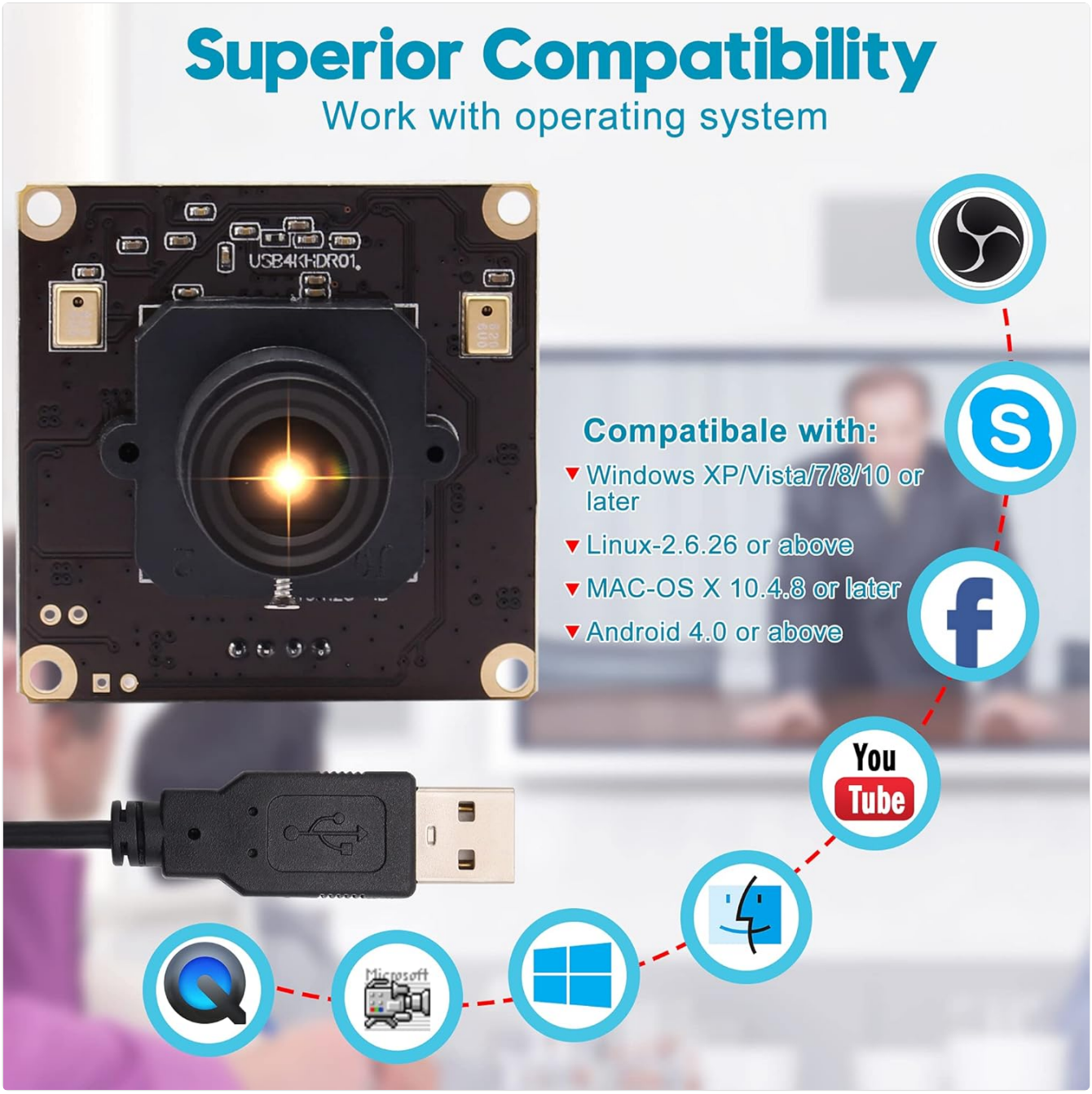

Image: The ELP 4K USB Camera module demonstrating compatibility with various communication and streaming applications.

4.4 Android OTG Support

The camera supports On-The-Go (OTG) functionality, allowing it to be connected and used with compatible Android mobile devices.

1. Ensure your Android device supports OTG functionality.
2. Connect the camera to your Android device using an OTG adapter (not included).
3. Use a compatible camera application on your Android device to access the camera feed and settings.

Video: This video demonstrates the ELP USB camera module's OTG support, showing its use with an Android mobile device.

5. Product Specifications

Feature	Specification
Brand Name	ELP
Item Weight	2.89 ounces
Product Dimensions	1.5 x 1.5 x 0.9 inches
Item Model Number	ELP-USB4KHDR01-L36
Color Name	3.6mm Lens
Special Features	4K ultra clear, Lightweight, Mini size, built in dual microphone, color
Photo Sensor Technology	CMOS (IMX317)
Video Capture Resolution	4K (3840x2160)
Maximum Focal Length	3.6mm (Fixed Focus)
Maximum Aperture	2.8 f
Video Capture Format	MJPEG/YUY2
Supported Audio Format	WAV, AAC, MP3
Connectivity Technology	USB

6. Troubleshooting

- **No Image/Video:** Ensure the USB cable is securely connected to both the camera and the host device. Verify that the correct camera device is selected in your software.
- **Blurry Image:** The 3.6mm lens is manually focused. Gently twist the lens barrel to adjust focus until the image is clear.
- **Poor Image Quality:** Check lighting conditions. Adjust camera parameters (Brightness, Contrast, Exposure, White Balance) in your software. Ensure the correct resolution and compression format are selected.
- **No Audio:** Confirm that the camera's microphone is selected as the audio input device in your operating system's sound settings and within your camera software.
- **Camera Not Recognized:** Try connecting to a different USB port. Restart your computer or device. For Raspberry Pi or Android, ensure proper power supply and OTG support.

7. Safety Information

Please use the ELP USB camera according to this user manual. Avoid exposing the camera to extreme temperatures, moisture, or direct sunlight for prolonged periods. Do not attempt to disassemble or modify the camera, as this may void the warranty and cause damage.

8. Warranty and Support

ELP products are covered by a standard manufacturer's warranty against defects in materials and workmanship. For warranty claims, technical support, or further assistance, please contact ELP customer service through your purchase platform or the official ELP website. Please retain your proof of purchase for warranty validation.