

ELP ELP-USBGS1200P01-H120

ELP High Speed Wide Angle Global Shutter USB Camera Module Instruction Manual

Model: ELP-USBGS1200P01-H120

Brand: ELP

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ELP High Speed Wide Angle Global Shutter USB Camera Module. This camera is designed for various applications requiring high-speed, distortion-free image capture, featuring a 2MP AR0234 sensor, 1920x1200 resolution at 90fps, and a 120-degree wide-angle lens.

SAFETY INFORMATION

- Do not expose the camera module to extreme temperatures or humidity.
- Avoid direct exposure to strong light sources, which may damage the sensor.
- Handle the camera module with care to prevent physical damage.
- Keep out of reach of children.
- Disconnect from power source before cleaning.

WHAT'S IN THE BOX

- 1x ELP USB Camera Module
- 1x USB Cable
- 1x User Manual (this document)

SETUP

1. Connecting the Camera Module

The ELP USB Camera Module is UVC compliant and supports plug-and-play functionality. No additional drivers are

required for most operating systems.

1. Connect the smaller end of the provided USB cable to the camera module's USB port.
2. Connect the larger end of the USB cable to an available USB port on your computer, laptop, Android device, or Raspberry Pi.
3. The device should automatically detect the camera. You can then open a compatible camera application (e.g., AMCap on Windows, Cheese on Linux, Photo Booth on Mac) to view the live feed.



Image: ELP USB Camera Module connected to a laptop, demonstrating plug-and-play setup.

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Video: Demonstrates connecting the ELP global shutter USB camera module to a PC and its wide-angle capabilities.

2. System Compatibility

The camera module is compatible with a wide range of operating systems, including:

- Windows (WinXP/Vista/Win7/Win8/Win9/Win10/Win11 etc.)
- Linux (above linux-2.6.26 with UVC)
- MAC-OS X 10.4.8 or later
- Android 4.0 or above with UVC
- Raspberry Pi

OPERATING INSTRUCTIONS

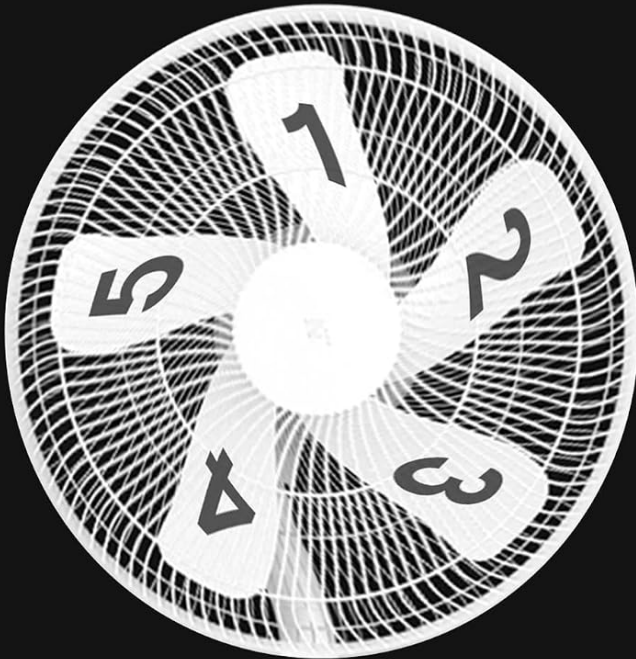
1. Global Shutter Technology

The camera features a global shutter, which captures all pixels simultaneously. This eliminates the "rolling shutter" effect (distortion) often seen with fast-moving objects, providing crisp and accurate images.



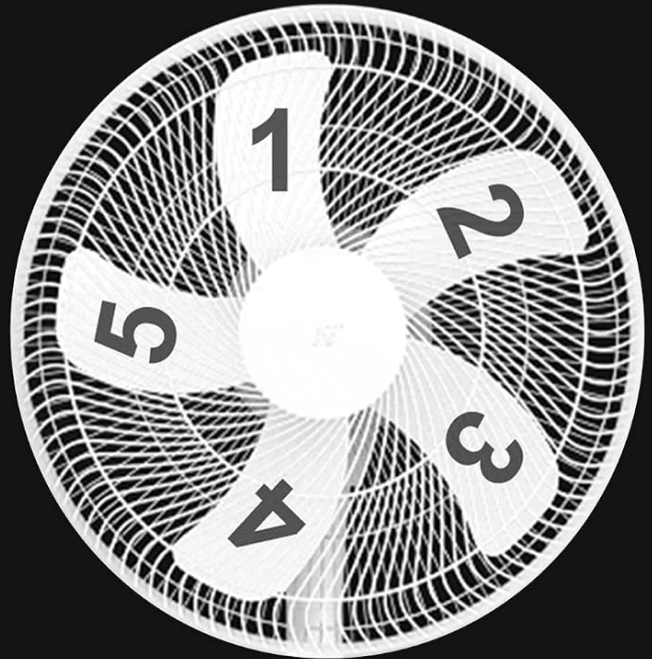
Exposing Entire Sensor at one time

Rolling shutter



Distortion

Global shutter



No Distortion

Image: Demonstrates the difference between global shutter (no distortion) and rolling shutter (distortion) when capturing a spinning fan.

2. High Frame Rate Capture

With a frame rate of 90fps at 1920x1200 resolution, this camera is ideal for capturing high-speed events, ensuring smooth and detailed video streams without lag.

90fps@1920x1200 High Frame

Ultra Smooth Streaming-No Lag

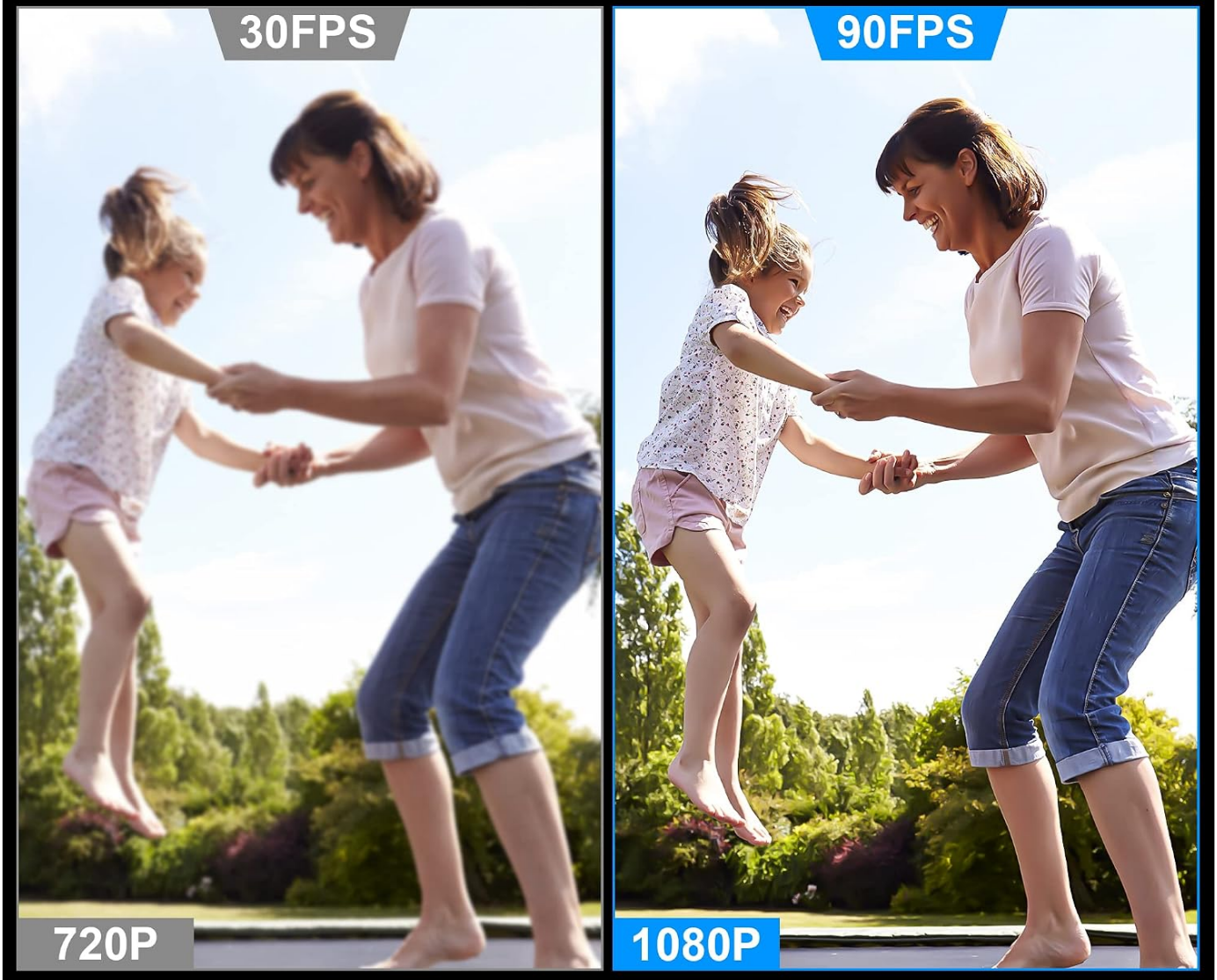


Image: Illustrates the difference in smoothness between 30fps (720P) and 90fps (1080P) video capture for fast-moving subjects.

3. Wide Angle No Distortion Lens

The 120-degree wide-angle lens provides a broad field of view (HFOV about 126 degrees) with minimal distortion, making it suitable for applications requiring a comprehensive perspective without visual anomalies.



No Distortion



Distortion

Wide Angle 120degree
No Distortion Lens

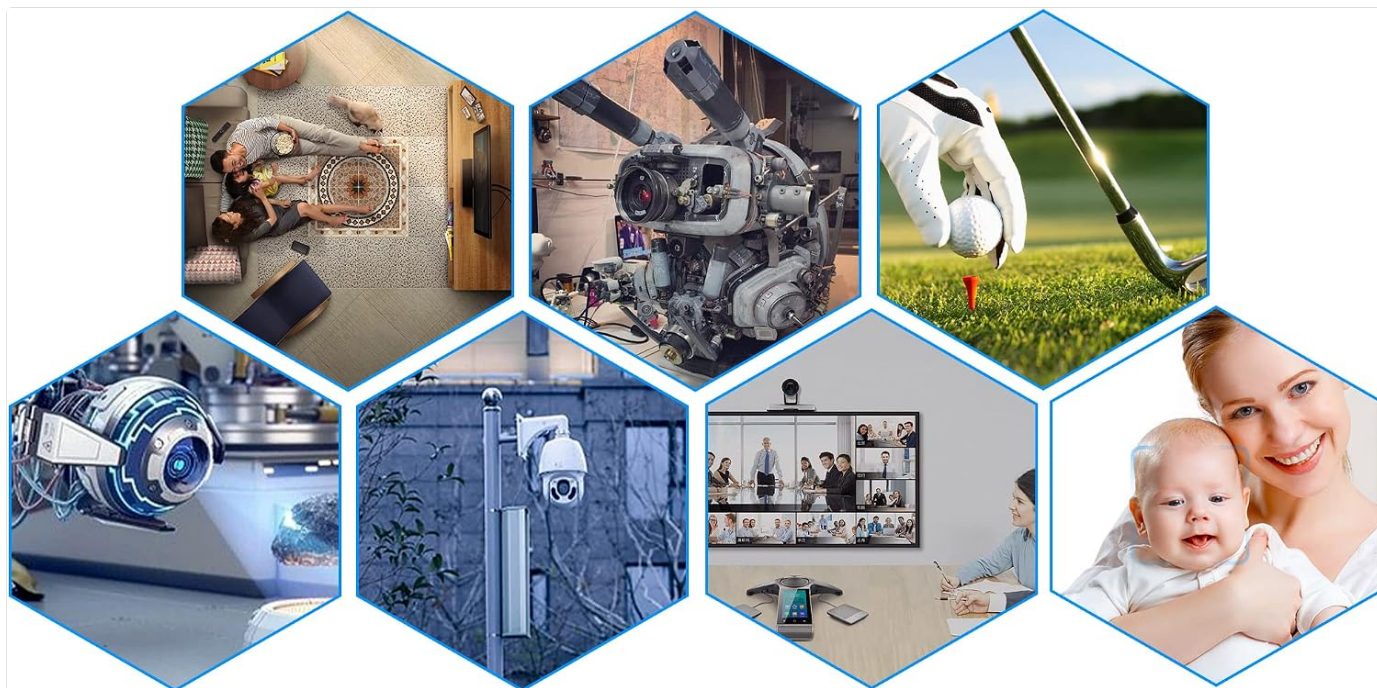


Image: Shows the wide-angle lens and highlights its no-distortion characteristic compared to distorted views.

4. Versatile Applications

This camera module is designed for a variety of uses, including:

- Home Security Systems
- High-speed shooting devices
- Observing golf swings and sports analysis
- Robotic machine vision
- Eye tracking and gesture recognition
- Video conferencing
- Baby monitoring
- Industrial inspection and production line monitoring



- ▶ **Home Security System**
- ▶ **High speed shooting device**
- ▶ **Observing Golf**
- ▶ **Robotic Machine Vision**
- ▶ **Eye Tracking Device**
- ▶ **Video Conference**
- ▶ **Baby Camera**

ELP

Image: Collage illustrating diverse applications such as home security, high-speed shooting, golf observation, robotics, eye tracking, video conferencing, and baby monitoring.

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Video: Real-world footage demonstrating the ELP 1200p global shutter high-speed camera in action, showcasing its performance.

MAINTENANCE

- To clean the lens, use a soft, lint-free cloth specifically designed for optical surfaces. Do not use abrasive cleaners.
- Keep the camera module free from dust and debris. Use a soft brush or compressed air to gently clean the board if necessary.
- Store the camera in a dry, cool environment when not in use.

TROUBLESHOOTING

Camera Not Detected

- Ensure the USB cable is securely connected to both the camera module and the host device.
- Try connecting the camera to a different USB port or a different host device to rule out port or device issues.
- Restart your computer or device.
- Verify that your operating system is compatible and up-to-date.

Poor Image Quality or Distortion

- Check the lens for smudges, dust, or damage. Clean gently if necessary.
- Ensure adequate lighting in your environment.
- Confirm that your camera application settings are configured for the correct resolution and frame rate (e.g., 1920x1200 at 90fps).
- If using a third-party application, ensure it supports global shutter cameras and high frame rates.

SPECIFICATIONS

Feature	Detail
Brand	ELP
Model Number	ELP-USBGS1200P01-H120
Photo Sensor Technology	CMOS
Sensor Type	CMOS (Aptina AR0234)
Video Capture Resolution	1080p (1920x1200)
Effective Still Resolution	2 MP
Image Capture Speed	90 fps
Shooting Modes	Global Shutter
Viewing Angle	126 Degrees (HFOV)
Lens Type	Prime, 120-degree No Distortion Lens
Focus Type	Fixed Focus
Connectivity Technology	USB
Operating System Compatibility	Android 4.0+, Linux (UVC), MAC-OS X 10.4.8+, Windows (XP/Vista/7/8/9/10/11)
Item Dimensions (D x W x H)	1.5"D x 1.5"W x 0.81"H (38mm x 38mm)
Features	1080P, Global shutter, Lightweight, high frame, mini size

WARRANTY AND SUPPORT

Warranty Information

This ELP camera module comes with a**2-year manufacturer warranty** from the date of purchase. Please retain your proof of purchase for warranty claims.

Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact ELP customer support. Refer to the contact information provided with your product packaging or visit the official ELP website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question