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Arducam B0497C

Arducam USB 3.0 Camera Module B0497C User Manual

8.3MP 4K IMX678 Low Light Webcam with 100°D Wide Angle M12 Lens for Windows, Linux

INTRODUCTION

This manual provides essential information for the setup, operation, and maintenance of your Arducam USB 3.0 Camera Module B0497C. This high-speed 4K camera features an 8.3MP IMX678 sensor, designed for superior low-light performance and wide-angle capture on Windows and Linux systems.



Image: Arducam 8.3MP IMX678 Low Light USB 3.0 Camera Module B0497C highlighting its 4K resolution, USB 3.0 connectivity, 90fps@720p high speed, and 100°(D) wide-angle lens.

WHAT'S IN THE BOX

Verify that all components are present upon unboxing:

- 1 x IMX678 USB3.0 Camera Module with Back Cover and Tripod Adapter
- 1 x 1m USB A to Type-C Cable

ArduCam

SKU: B0497



Image: Contents of the Arducam USB 3.0 Camera Module package, showing the camera module and the USB Type-C cable.

SETUP INSTRUCTIONS

1. **Connect the USB Cable:** Insert the USB Type-C end of the provided 1m cable into the camera module's Type-C port.
2. **Connect to Computer:** Plug the USB-A end of the cable into an available USB 3.0 port on your Windows or Linux computer. For optimal performance, use a USB 3.0 port.
3. **Driver Installation (Plug and Play):** The camera is designed for plug-and-play operation. No additional drivers are typically required for Windows and Linux operating systems. The system should automatically detect and install the necessary components.
4. **Mounting (Optional):** The camera module includes a tripod adapter. You can attach it to a standard tripod or mounting bracket for stable positioning.

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USB 3.0

Type-C

Image: Detail of the USB Type-C port on the Arducam camera module, indicating USB 3.0 connectivity.



Note: The tripod is not included

Image: The Arducam camera module attached to a tripod, demonstrating a typical setup configuration. Note: Tripod is not included.

OPERATING INSTRUCTIONS

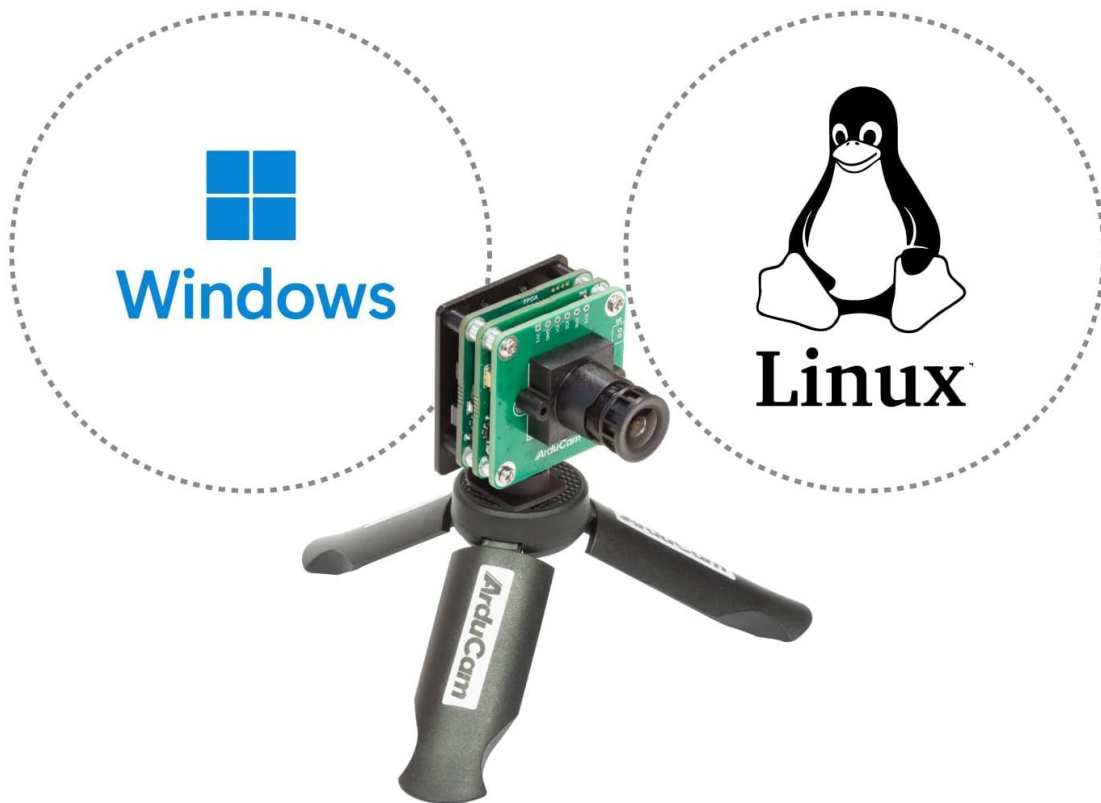
Software Compatibility

The Arducam B0497C is compatible with standard webcam software on both Windows and Linux operating systems. It functions as a UVC (USB Video Class) device.

- **Windows:** Use built-in camera applications, OBS Studio, VLC Media Player, or other third-party software that supports UVC cameras.
- **Linux:** Utilize applications like Cheese, OBS Studio, VLC Media Player, or custom applications that interface with V4L2 (Video for Linux Two) devices.

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Note: The tripod is not included

Image: Visual representation of the camera module's compatibility with Windows and Linux operating systems.

Basic Operation

1. **Launch Software:** Open your preferred camera application on your computer.
2. **Select Camera:** If you have multiple cameras, select "Arducam USB Camera" or a similar identifier from the device list within your software.
3. **Adjust Settings:** Most applications allow you to adjust resolution, frame rate, brightness, contrast, and other image parameters. The camera supports resolutions up to 3840x2160 (4K) and frame rates up to 90fps at 720p.
4. **Low Light Performance:** The IMX678 sensor provides enhanced low-light capabilities. For optimal results in dim environments, ensure your software settings are configured to utilize these features.

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Other



4K low light

Image: A visual comparison demonstrating the superior low-light performance of the ArduCam 4K IMX678 camera compared to a standard camera.

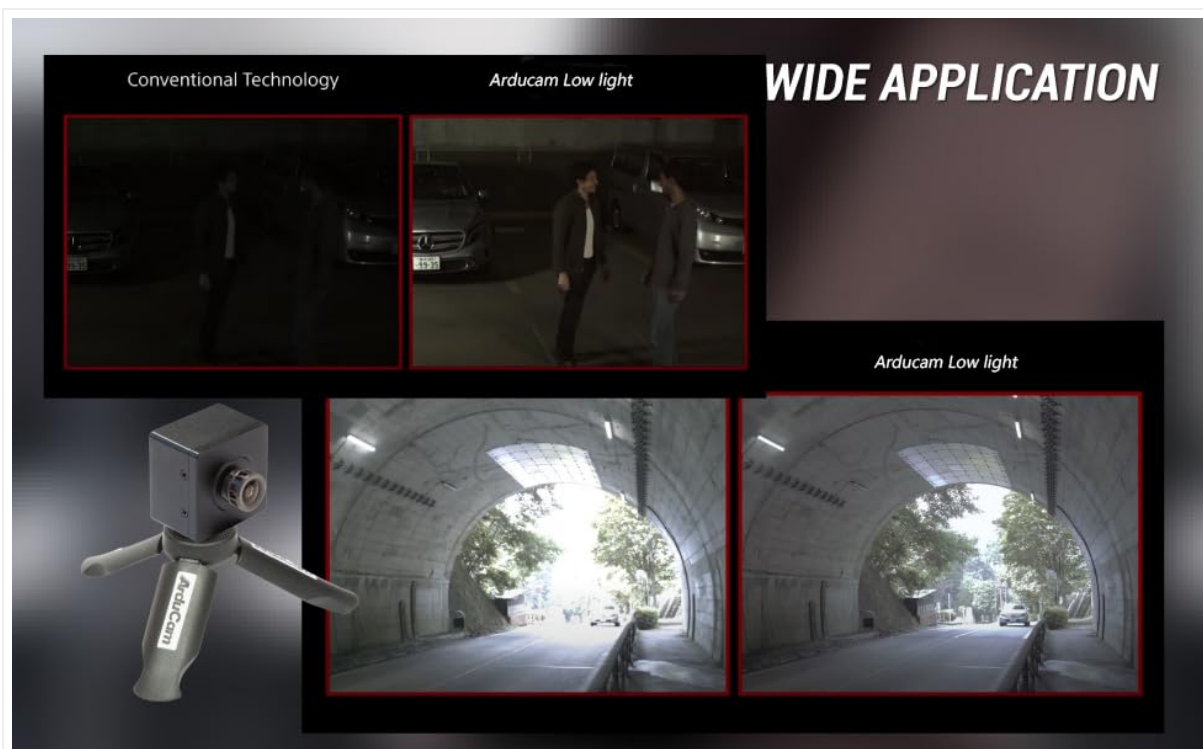


Image: Examples illustrating the camera's effective performance in low-light conditions, such as indoor and outdoor night

MAINTENANCE

- **Cleaning the Lens:** Use a soft, lint-free cloth specifically designed for optical lenses to gently wipe the camera lens. Avoid abrasive materials or harsh chemicals.
- **Cleaning the Module:** For the camera body, use a dry, soft cloth to remove dust. Do not use liquid cleaners directly on the module.
- **Storage:** When not in use, store the camera module in a clean, dry environment, away from extreme temperatures and direct sunlight.
- **Handling:** Handle the camera module by its edges to avoid touching the lens or the circuit board components.

TROUBLESHOOTING

Camera not detected by computer:

- Ensure the USB cable is securely connected to both the camera and the computer.
- Try a different USB port on your computer, preferably a USB 3.0 port.
- Test with a different USB cable if available.
- Restart your computer.
- Check your operating system's device manager (Windows) or lsusb command (Linux) to see if the device is listed.

Poor image quality or excessive noise:

- Ensure adequate lighting in the environment. While the camera has low-light capabilities, extreme darkness will still affect image quality.
- Adjust camera settings within your software (e.g., exposure, gain, white balance).
- Verify that the lens is clean and free from smudges or dust.
- Check for available firmware updates from Arducam's official website, as updates can improve image processing.

Low frame rate:

- Ensure the camera is connected to a USB 3.0 port. USB 2.0 ports will limit bandwidth and frame rate.
- Reduce the resolution or disable certain image enhancements in your software to decrease bandwidth requirements.
- Close other applications that might be consuming significant system resources.

SPECIFICATIONS

Feature	Detail
Model Name	B0497C
Sensor	IMX678 CMOS
Resolution	8.3MP (3840x2160)
Frame Rate	90fps@720p

Feature	Detail
Lens Type	M12 Lens, F1.65 Aperture
Field of View (FoV)	100°(D)
Connectivity	USB 3.0 (Type-C connector on camera)
Special Features	Low Light Performance, Onboard ISP (de-Bayer, gamma, BLC, AE, AWB, CCM, RGB2YUV)
Operating Systems	Windows, Linux (Plug and Play)
Item Weight	3.53 ounces
Package Dimensions	1.34 x 1.34 x 1.34 inches

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Arducam website or contact their customer service directly. Keep your purchase receipt for warranty claims.
Arducam Official Website: www.arducam.com