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Arducam B0576C

Arducam Starvis USB Camera Module B0576C User Manual

Model: B0576C

1. INTRODUCTION

Thank you for choosing the Arducam Starvis USB Camera Module B0576C. This 1080P low-light webcam is designed for various applications, including PC, laptop, and Raspberry Pi integration, offering exceptional performance in challenging lighting conditions. This manual provides detailed instructions for setup, operation, and maintenance to ensure optimal use of your camera module.

2. PRODUCT FEATURES

- **Ultra Low Light Performance:** Equipped with the IMX662 sensor, this USB 2.0 camera provides high sensitivity in near-dark environments, enabling clear imaging at less than 0.1 lux illumination.
- **Excellent Performance for Challenging Lighting:** Delivers balanced exposure without motion blur in various lighting conditions, from bright sunlight to backlit rooms.
- **True Plug-and-Play USB 2.0 UVC Compliance:** Driver-free compatibility with Windows, Linux, and embedded systems like Raspberry Pi. Connect via USB 2.0 for instant recognition.
- **Wide-Angle Lens:** Features a fixed 102° diagonal Field of View (FoV) lens, suitable for capturing expansive scenes. Multi-layer coating reduces glare, and an IR filter ensures accurate color reproduction.
- **Comprehensive ISP Controls:** Offers granular Image Signal Processor (ISP) controls for precision tuning, including exposure/gain (manual/auto), white balance (auto/manual), backlight compensation, sharpness, gamma correction, and low-light boost.

3. WHAT'S IN THE BOX

Verify that all items are present in the package:

- 1 x Arducam Ultra Low Light USB2 UVC Camera Module
- 1 x 1m USB2 to B4B-ZR JST Cable



Image: Arducam Ultra Low Light USB2 UVC Camera Module with included 1m USB2 to B4B-ZR JST Cable.

4. SETUP INSTRUCTIONS

1. **Connect the Cable:** Carefully connect the B4B-ZR JST end of the 1m USB2 cable to the corresponding port on the Arducam camera module. Ensure the connection is secure.

ArduCam

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Image: Close-up of the Arducam camera module showing the connector for the USB cable.

2. **Connect to Host Device:** Plug the standard USB-A end of the cable into an available USB 2.0 port on your PC, laptop, or Raspberry Pi.



Image: Connectivity diagram illustrating how the camera module connects to various host devices like PCs, laptops, and Raspberry Pi.

3. **Driver Installation (Not Required):** The camera is UVC (USB Video Class) compliant, meaning it is plug-and-play and does not require specific driver installation on most Windows, Linux, and macOS systems. It will be automatically recognized as a standard webcam.
4. **Positioning the Camera:** The camera module includes a rotatable bracket for flexible positioning. Adjust the bracket to achieve the desired viewing angle.



Rotatable Bracket

Image: The Arducam camera module demonstrating its rotatable bracket for adjustable positioning.

5. OPERATING INSTRUCTIONS

Once connected, the Arducam Starvis USB Camera Module can be used with any standard webcam software or application that supports UVC devices.

5.1 Basic Operation

- **Software Recognition:** Open your preferred camera application (e.g., Camera app on Windows, OBS Studio, VLC, or custom vision software on Raspberry Pi). Select the Arducam camera from the list of available video devices.
- **Video Preview:** The camera feed should appear in the application window.
- **Image Capture/Video Recording:** Use the software's functions to capture still images or record video.

5.2 Advanced ISP Controls

For advanced users, the camera offers comprehensive Image Signal Processor (ISP) controls. These settings can typically be accessed through your camera software's video settings or properties menu.

- **Exposure/Gain:** Adjust manually for specific lighting conditions or use auto mode for general use. Essential for optimizing low-light performance.

- **White Balance:** Set to auto for automatic color correction or manually adjust for accurate hues under mixed lighting.
- **Backlight Compensation:** Improves visibility of subjects in front of bright backgrounds.
- **Sharpness:** Enhances edge detail in the image.
- **Gamma Correction:** Adjusts the brightness and contrast of the image.
- **Low-Light Boost (LLC):** Activates specific algorithms to further enhance image quality in extremely low light.



Image: Visual comparison demonstrating the camera's superior performance in ultra low light conditions.

6. MAINTENANCE

- **Cleaning the Lens:** Use a soft, lint-free cloth specifically designed for optical lenses to gently clean the camera lens. Avoid abrasive materials or harsh chemicals.
- **Storage:** When not in use, store the camera module in a clean, dry environment, away from direct sunlight and extreme temperatures.
- **Handling:** Avoid dropping the camera or subjecting it to strong impacts, as this can damage internal components.

7. TROUBLESHOOTING

- **Camera Not Detected:**
 - Ensure the USB cable is securely connected to both the camera and the host device.
 - Try connecting to a different USB port on your device.
 - Test the camera on another computer or Raspberry Pi to rule out host device issues.
 - Restart your computer or Raspberry Pi.
- **No Image/Black Screen:**
 - Verify that the camera is selected as the active video input in your application.
 - Check if the lens cap (if any) is removed.

- Ensure there is sufficient lighting in the environment, especially if ISP settings are manually configured for very specific conditions.

- **Poor Image Quality:**

- Clean the camera lens as described in the Maintenance section.
- Adjust ISP settings (exposure, white balance, sharpness) within your camera application.
- Ensure your host device's USB port is functioning correctly and providing adequate power.

8. SPECIFICATIONS

Feature	Detail
Model Number	B0576C
Sensor	IMX662 (Starvis)
Resolution	1080P
Connectivity	USB 2.0
UVC Compliance	Yes (Plug-and-Play)
Compatible Devices	Windows, Linux, Raspberry Pi
Lens Type	Fixed Wide Angle
Field of View (FoV)	102 Degrees (Diagonal)
Optical Sensor Size	1/2.7 inch
Product Dimensions	1.4 x 1.4 x 1.73 inches (35.56 x 35.56 x 43.94 mm)
Item Weight	3.7 ounces (105 grams)



Image: Dimensions of the Arducam Starvis USB Camera Module.

9. WARRANTY AND SUPPORT

This product is manufactured by Arducam. For warranty information and technical support, please refer to the official Arducam website or contact their customer service.

Return Policy: The product is typically eligible for a 30-day refund/replacement policy from the date of purchase. Please check with your retailer for specific return terms.

Manufacturer: Arducam

For further assistance, visit the [Arducam Store on Amazon](#) or their official website.



