

ArduCam



Datasheet

1.58MP IMX296 Global Shutter USB3.0 Camera Module

B0499

CONTENT

1. Overview
2. Disclaimer
3. Technical Parameters
4. Camera Dimension Diagrams
5. Camera Parameters Interface
6. Operating Condition
7. Contact Us

Version	Compile	Auditing	Authorize	DATE
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1. Overview

The Arducam USB 3.0 includes a diverse range of camera modules, each tailored to specific use cases and requirements. This datasheet will detail the specifications and features of each individual product for user reference, allowing you to make informed decisions about which camera module best suits your project.

2. Disclaimer

While we have made every effort to ensure the accuracy and completeness of the information presented in this datasheet, Arducam reserves the right to make changes to product specifications, features, and documentation without notice. All information provided in this datasheet is subject to change and should be considered for reference purposes only.

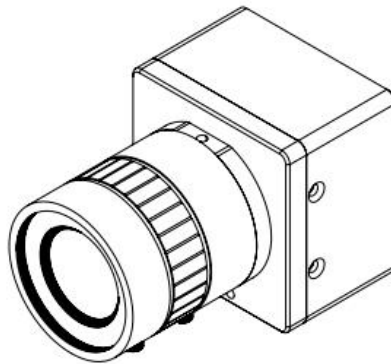
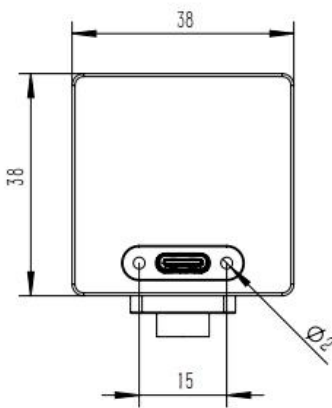
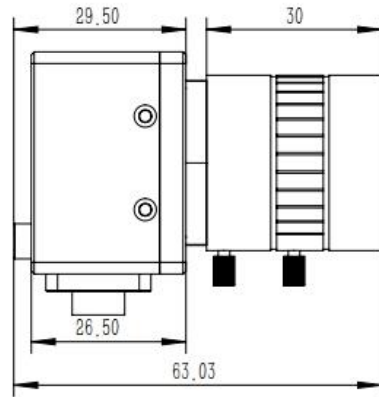
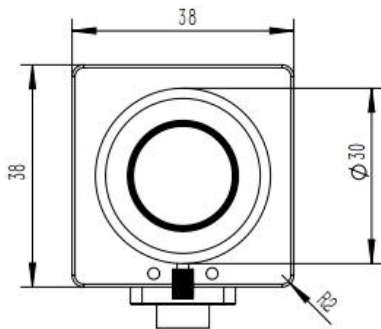
3. Technical Parameters

Image Sensor	
Sensor	IMX296
Resolution	1.58MP
Chroma	Color
Shutter Type	Global Shutter
Optical Format	1/2.9"
Output Format	YUY2
Pixel Size	3.45 μ m x3.45 μ m
Sensor Active Area	1456(H) \times 1088(V)
Frame rate (USB 3.0)	1456*1088@44fps
Frame rate (USB 2.0)	1456*1088@10fps
Lens	
Focus Type	Manual Focus
FOV	60 $^{\circ}$ (D) \times 50 $^{\circ}$ (H) \times 38 $^{\circ}$ (V)
Lens Mount	CS Mount
F.NO	F1.2
E.F.L	6mm
IR Sensitivity	Integral IR-cut Filter, visible light only
Default Focus Range	3m- ∞
USB Interface	
Interface	USB 3.2 Gen 1 device, backward compatible with USB 2.0 hosts
Connector	Type-C reversible interface connector

UVC Compliant	No additional drivers required
Electrical and Mechanical	
Operating Voltage	DC 5V +/- 5%
Operating Temp.	32°F-158°F (0°C to 70°C)
Power Requirements	Max: 1.89W, Min: 1.62W
Camera Board Size	34×34 mm
Functionality and Compatibility	
Supported OS	Windows, Linux
Recommend Sample Application	PotPlayer for Windows, qv4l2 for Linux
UVC Controls	Brightness, Contrast, Saturation, White Balance (Auto/Manual), Gain, Exposure (Manual/Auto)

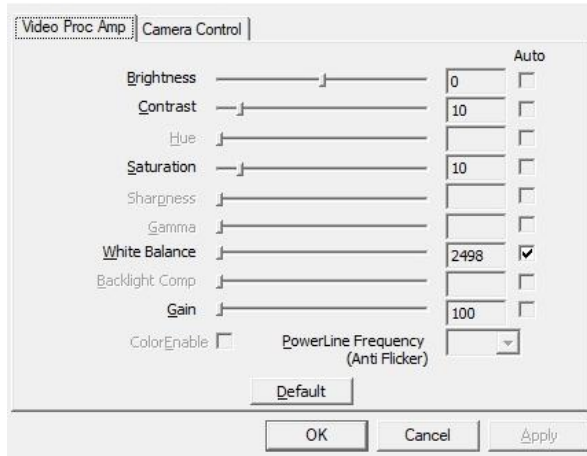
4. Camera Dimension Diagrams

Unit: mm

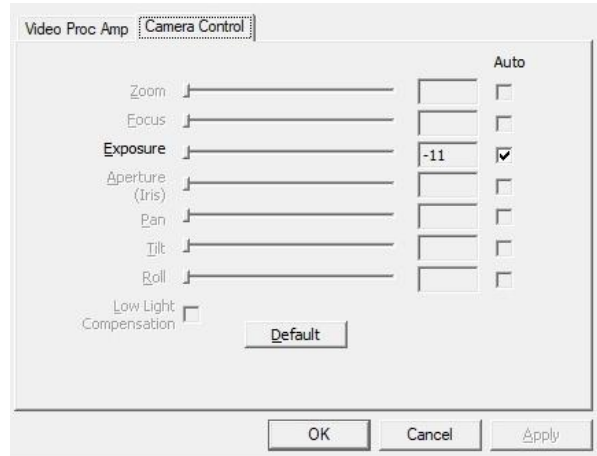


5. Camera Parameters Interface

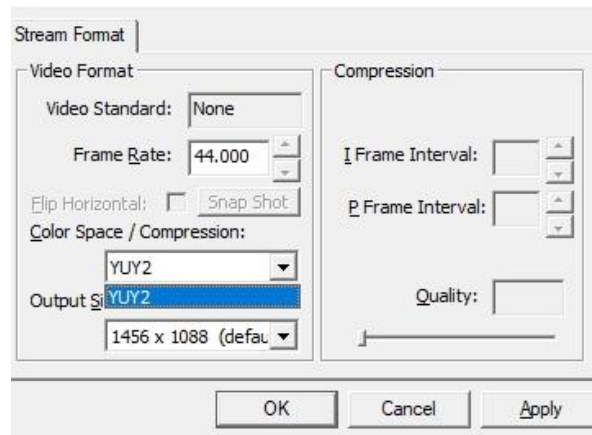
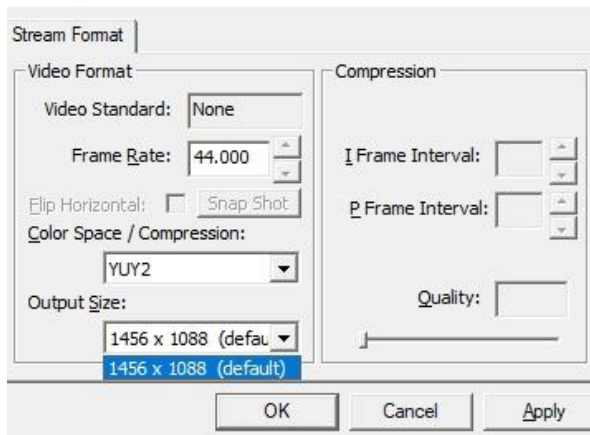
- Video Proc Amp



- Camera Control



- Video Capture Pin



6. Operating Condition

6.1 YUY2 with USB 3.0

The following table lists the power consumption of the B0499 YUY2 format with USB 3.0 devices.

Resolution	Max Frame Rate (fps)	Supply Voltage (V)	Typical Current (mA)	Power Consumption (W)
1456x1088	44	5	378	1.89
Power at Idle Condition	/	5	132	0.66

6.2 YUY2 with USB 2.0

The following table lists the power consumption of the B049 YUY2 format with USB 2.0 devices.

Resolution	Max Frame Rate (fps)	Supply Voltage (V)	Typical Current (mA)	Power Consumption (W)
1456x1088	10	5	324	1.62
Power at Idle Condition	/	5	132	0.66

7. Contact Us

For any product-related questions, please feel free to contact us:

- Official website: www.arducam.com
- Contact form: <https://www.arducam.com/contact-arducam/>
- Tel: +1(319)471-7640