

# ArduCam



## Datasheet

IMX519 FPD-Link SerDes V3Link USB 3.0 Camera Kit

**B0514**

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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

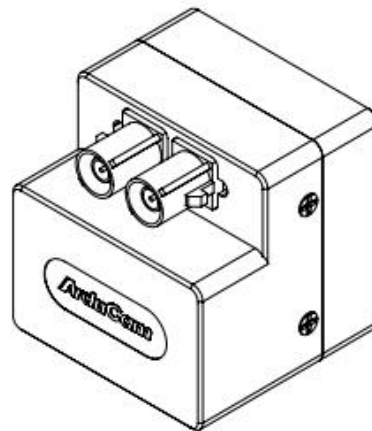
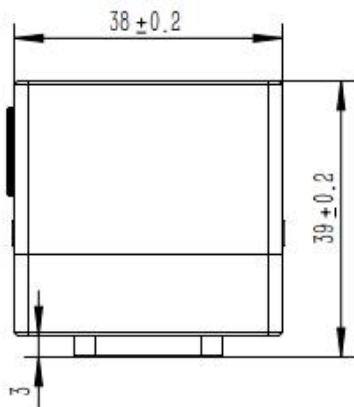
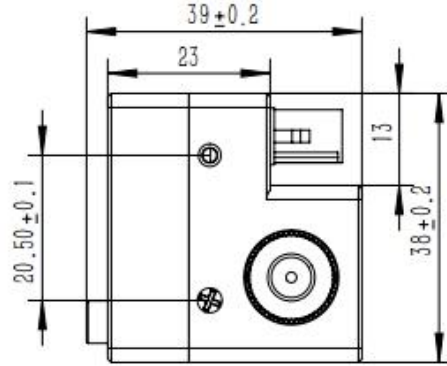
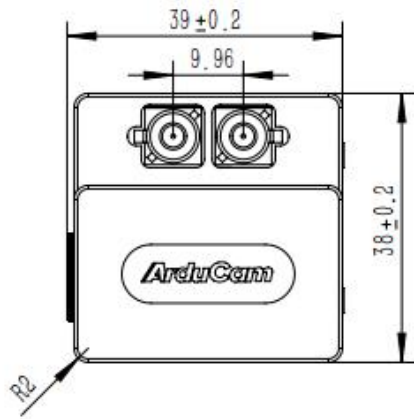
Image Sensor	
Sensor	IMX519
Resolution	16MP
Chroma	Color
Shutter Type	Rolling Shutter
Optical Format	1/2.53"
Output Format	YUY2
Pixel Size	1.22 $\mu$ m x 1.22 $\mu$ m
Sensor Active Area	4656(H) $\times$ 3496(V)
Frame rate (USB 3.0)	1280*720@80fps, 1920*1080@60fps, 2320*1748@25fps, 3840*2160@15fps, 4656*3496@8fps
Frame rate (USB 2.0)	1280*720@10fps
IR Sensitivity	Integral IR-cut Filter, visible light only
Lens	
Focus Type	Motorized Focus
FOV	80 $^{\circ}$ (D) $\times$ 66 $^{\circ}$ (H) $\times$ 52(V)
Lens Mount	Stock Lens
F.NO	F1.75
E.F.L	4.28mm
Default Focus Range	10cm- $\infty$
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
<b>Electrical and Mechanical</b>	
Operating Voltage	DC 5V +/- 5%
Operating Temp.	32°F-158°F (0°C to 70°C)
Power Requirements	Max: 2.0W, Min: 1.2W
External Power Requirements	DC 12V/3A (5.5*2.1mm Barrel Connector)
Camera Board Size	24×25 mm
<b>Functionality and Compatibility</b>	
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), Focus(Manual)

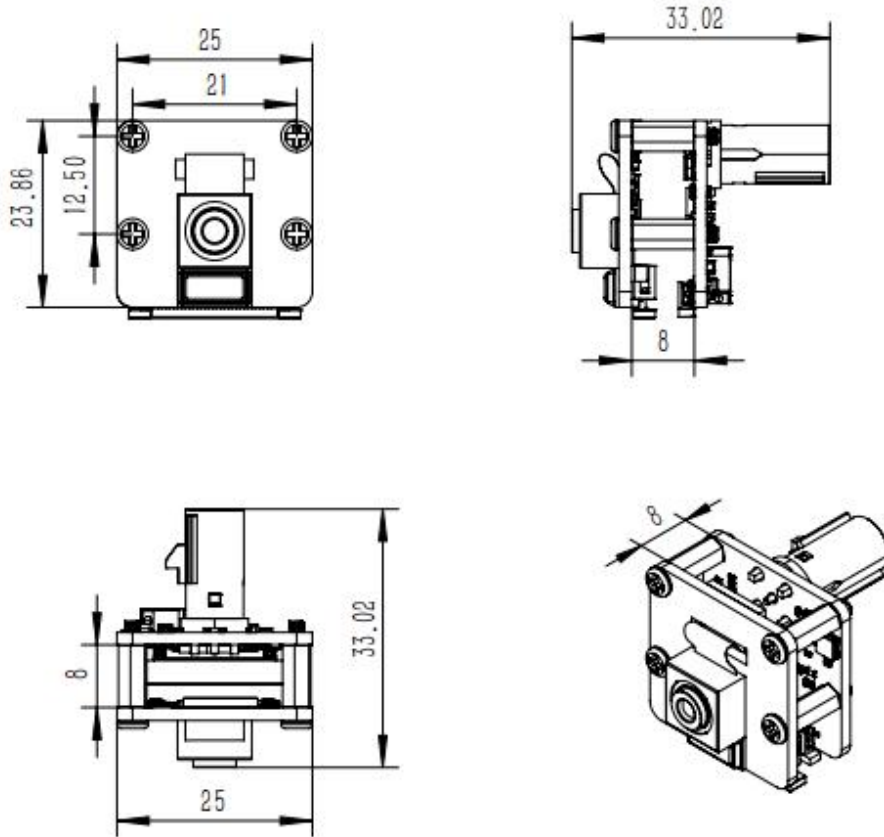
### 4. Camera Dimension Diagrams

Unit: mm

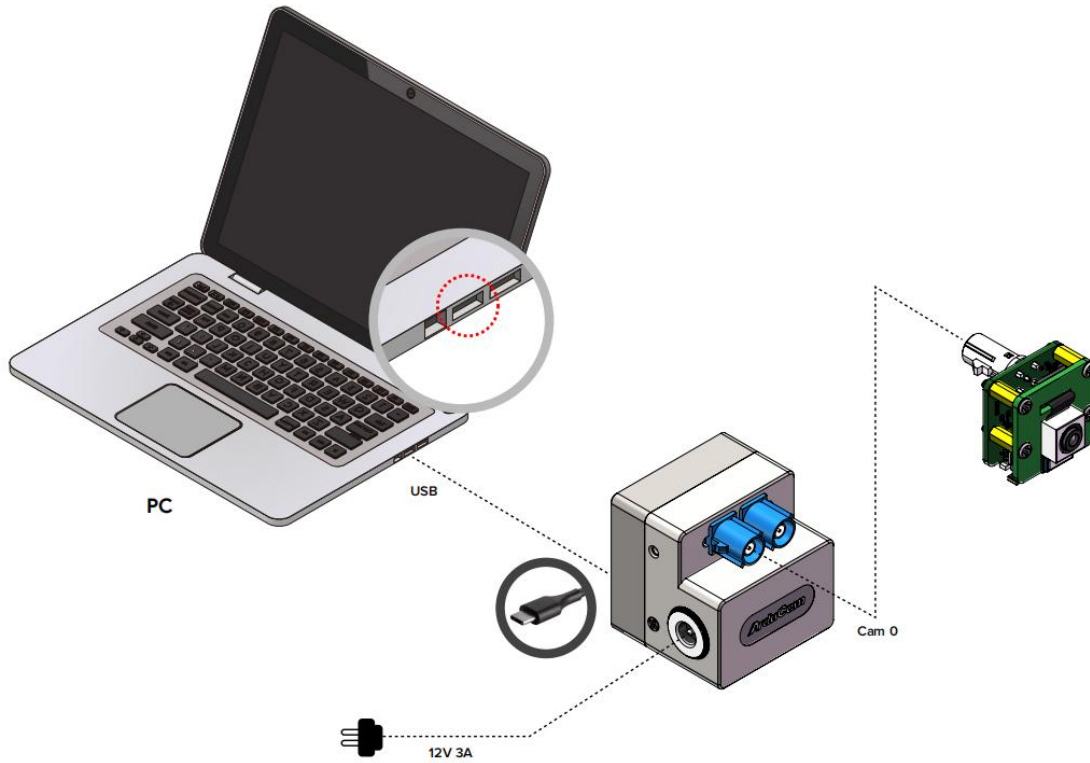
Arducam V3Link USB3 Rx board with Metal Case



Arducam V3Link Tx board with Camera Module

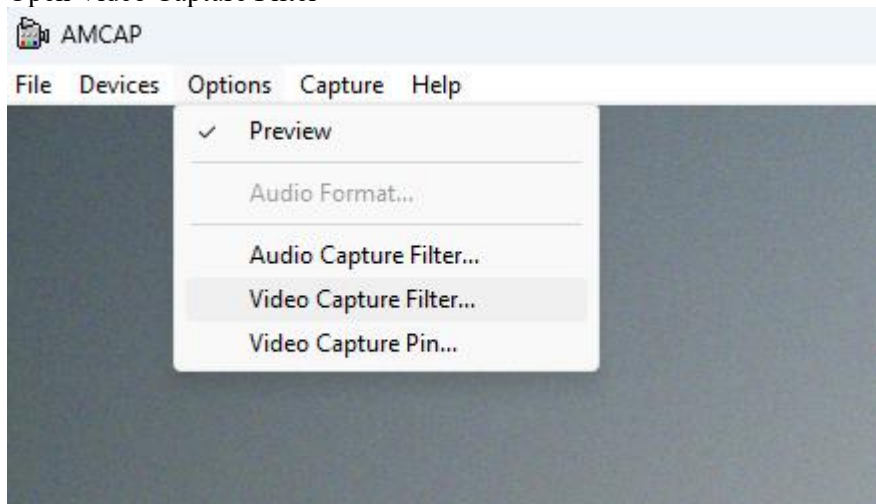


### 5. Hardware Connection

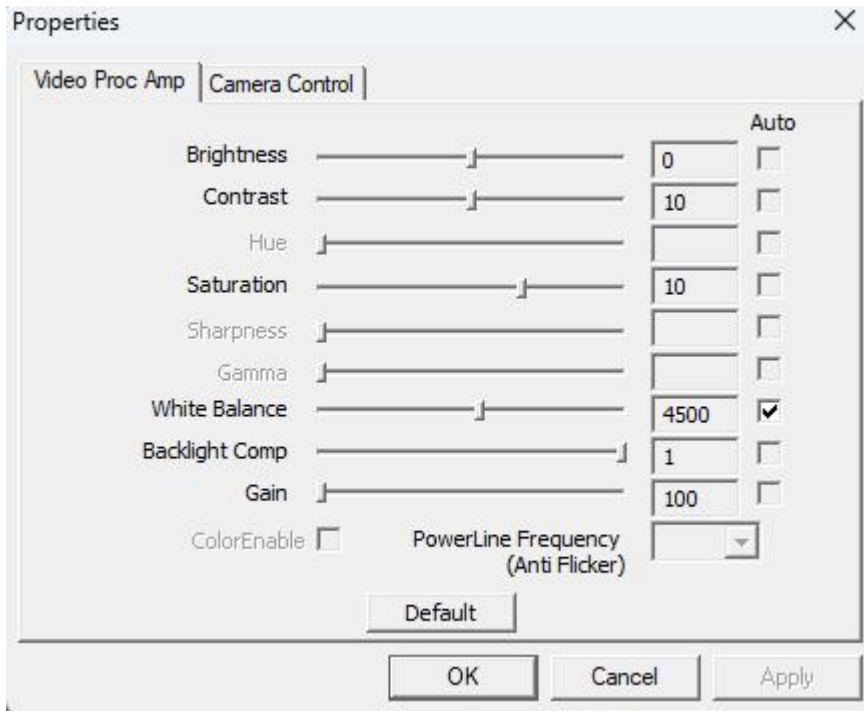


Note: The default camera channel is Cam0, if you want to operate another camera that is connected to Cam1, there is a need to switch the camera channel, please refer to the pictures below:

Open Video Capture Filter



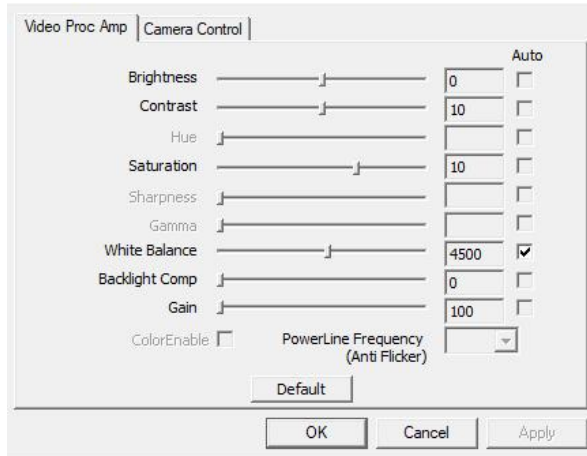
Change the Value of Backlight Comp from 0 to 1. (0 means Cam0,1 means Cam1)



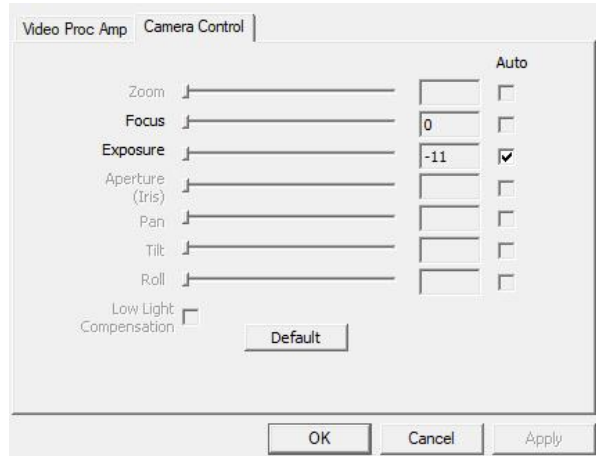


## 6. Camera Parameters Interface

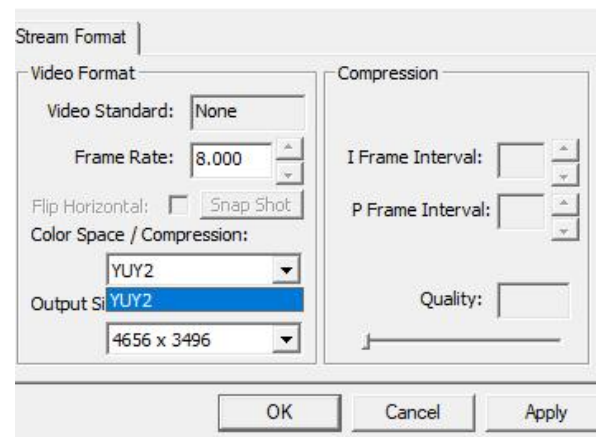
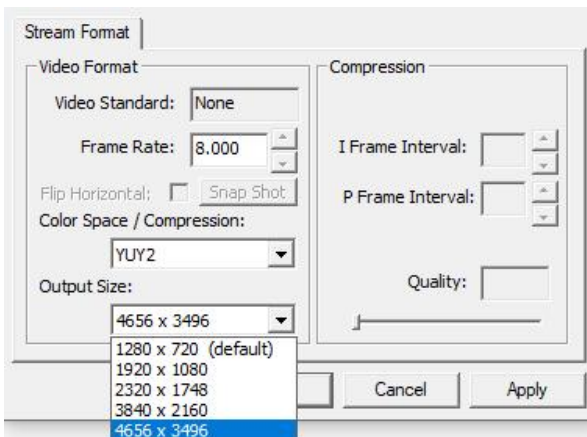
### - Video Proc Amp



### - Camera Control



### - Video Capture Pin



## 7. Operating Condition

### 7.1 YUY2 with USB 3.0

The following table lists the power consumption of the B0514 YUY2 format with USB 3.0 devices and external power consumption. (Note: This device requires a 12V 3A power adapter to supply external power. )

Resolution	Max Frame Rate (fps)	Supply Voltage (V)	External Supply Voltage (V)	Typical Current (mA)	External Current (V)	Power Consumption (W)	External Power Consumption (W)
4656x3496	8	5	12	400	200	2.0	2.4
3840x2160	15	5	12	400	200	2.0	2.4
2320x1748	25	5	12	360	166	1.8	2.0
1920x1080	60	5	12	380	175	1.9	2.1
1280x720	80	5	12	340	166	1.7	2.0
Power at Idle Condition	/	5	12	240	100	1.2	1.2

### 7.2 YUY2 with USB 2.0

The following table lists the power consumption of the B0514 YUY2 format with USB 2.0 devices.

Resolution	Max Frame Rate (fps)	Supply Voltage (V)	External Supply Voltage (V)	Typical Current (mA)	External Current (V)	Power Consumption (W)	External Power Consumption (W)
1280x720	10	5	12	280	125	1.4	1.5
Power at Idle Condition	/	5	12	240	100	1.2	1.2

## 8. Contact Us

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

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