



# Datasheet

20MP IMX283 USB3.0 Camera Module B0477

## 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
V1.0	Bin L	Kai Z	Lee J	31.08.2023

### 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

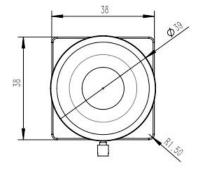
Image Sensor				
Sensor	IMX283			
Resolution	20MP			
Chroma	Color			
Shutter Type	Rolling shutter			
Optical Format	1"			
Output Format	YUY2			
Pixel Size	2.4µm x2.4µm			
Sensor Active Area	5496(H)×3672(V)			
Frame rate (USB 3.0)	1280×720@120fps, 1920×1080@60fps, 2720×1536@40fps, 3840×2160@20fps, 5472×3648@9fps			
Frame rate (USB 2.0)	1280×720@10fps			
Lens				
Focus Type	Manual Focus			
FOV	60°(D)×49°(H)×38°(V)			
Lens Mount	C-Mount			
F.NO	F1.4-F16			
Focal Length	16 mm			
Default Focus Range	5m~∞			
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			

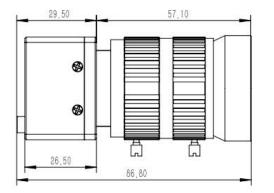
Proprietary	to	Arducam
-------------	----	---------

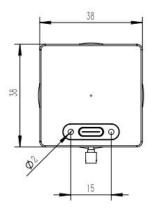
Electrical and Mechanical				
Operating Voltage	DC 5V +/- 5%			
Operating Temp.	32°F-158°F (0°C to 70°C)			
Power Requirements	Max: 1.38W, Min: 0.75W			
Camera Board Size 34×34 mm				
Functionality and Compatibility				
Supported OS	Windows, Linux			
Recommend Sample Det Discourse for Windows and 12 for Linear				
Application PotPlayer for Windows, qv412 for Linux				
UVC Controls	Brightness, Contrast, Saturation, White Balance (Auto/Manual), Gain, Exposure (Manual/Auto)			

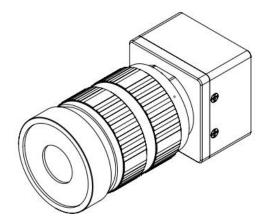
## 4. Camera Dimension Diagrams

Unit: mm









## 5. Camera Parameters Interface

#### - Video Proc Amp

							Auto
1	Brightness		I			0	
	Contrast	-1-				10	
	Hue	-					
	Saturation	-1				10	
	Sharpness	-					
	Gamma	1-					
Whi	te Balance	-				2498	
Back	ight Comp	1-					
	Gain	1				100	
	ColorEnable	e 🗌	PowerL	ine Freque (Anti Flio			~
		[	Default				
	OK	-	Cancel		Apply		

		Auto
2	oom I	
F	ocus I	
Expo	sure	-11
Ape	ture	
	Pan I	
	Tilt I	
	Roll	
Loi Comper	v Light sation Default	

#### - Camera Control

#### - Video Capture Pin

Stream Format		Stream Format	
Video Format Video Standard: None	Compression	Video Format Video Standard: None	Compression
Frame Rate: 120.000	I Frame Interval:	Frame Rate: 120.000	I Frame Interval:
Flip Horizontal: Snap Shot	P Frame Interval:	Flip Horizontal: Snap Shot Color Space / Compression:	P Frame Interval:
YUY2 V Output Size:	Quality:	YUY2 V Output Si YUY2	Quality:
1280 x 720 5472 x 3648 (default) 3840 x 2160 2720 x 1536	Apply	1280 x 720 V	
1920 x 1080 1280 x 720		OK Cancel	Apply

## 6. Operating Condition

#### 6.1 YUY2 with USB 3.0

The following table lists the power consumption of the B0477 YUY2 format with USB 3.0 devices.

Resolution	Max Frame Rate (fps)	Supply Voltage (V)	Typical Current (mA)	Power Consumption (W)
5472x3648	9	5	264	1.32
3840x2160	20	5	276	1.38
2720x1536	40	5	244	1.22
1920x1080	60	5	232	1.16
1280x720	120	5	228	1.14
Power at Idle Condition	/	5	84	0.42

#### 6.2 YUY2 with USB 2.0

The following table lists the power consumption of the B0477 YUY2 format with USB 2.0 devices.

Resolution	Max Frame Rate (fps)	Supply Voltage (V)	Typical Current (mA)	Power Consumption (W)
1280x720	10fps	5	150	0.75
Power at Idle Condition	/	5	84	0.42

## 7. Contact Us

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

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