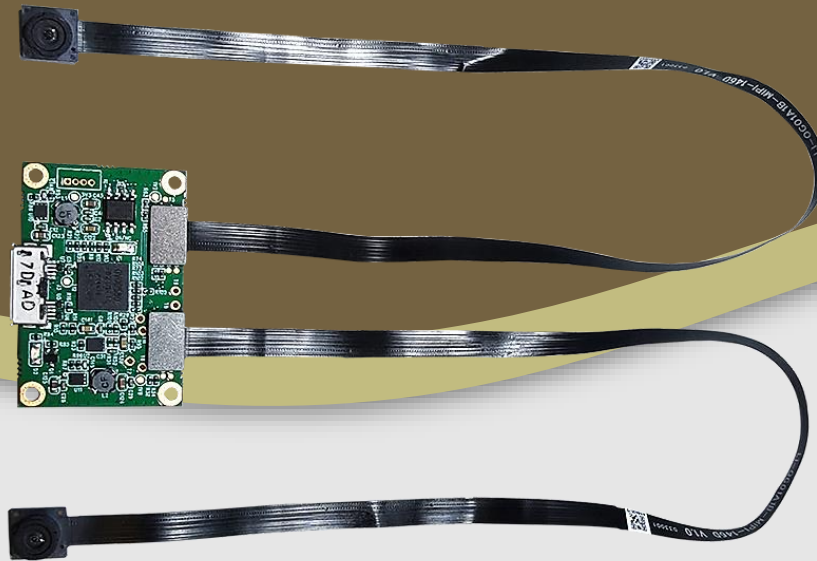




**LEOPARD**  
IMAGING

# LI-OV580-OG01A1BST



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## TECHNICAL FEATURES

- USB 3.0 Super Speed support
- USB + 5 VDC powered device
- Includes 1 x LI-OV580-ST-AXT board + 2 x LI-OG01A1B-MIPI-146D camera modules
- RAW output without compression
- UVC compliant
- USB 2.0 backwards compatible
- Allows customization
- Sensor: OMNIVISION b&w CMOS 1.3MP Image Sensor OG01A1B
- Part#: **LI-OV580-OG01A1BST**

## SDK SUPPORTED

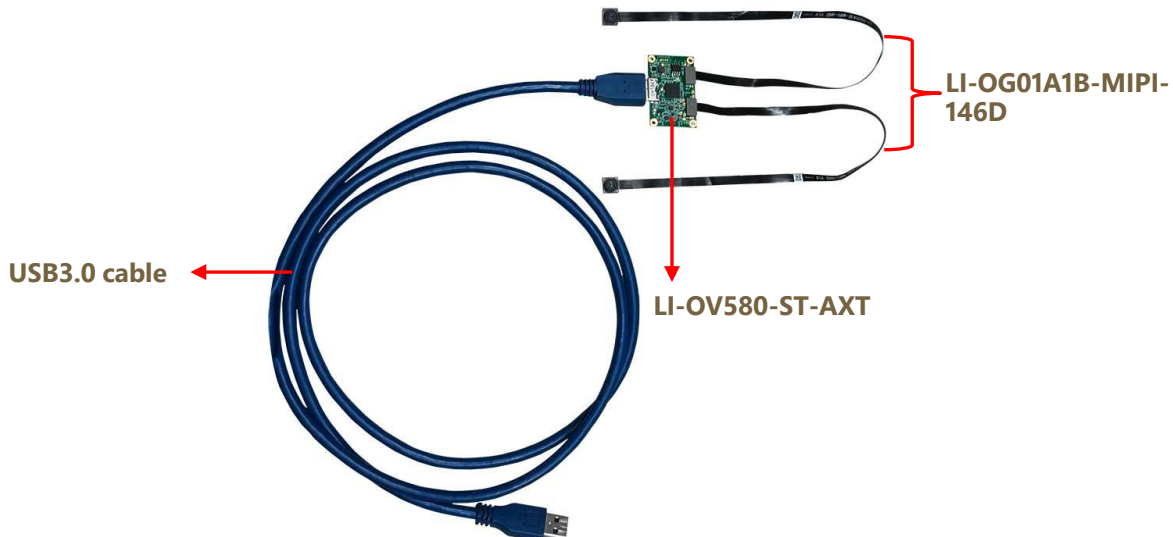
- Capture & Display

## LENS SPECIFICATIONS

Focusing Range	10 cm ~ Infinity
Focal Length	1.28 mm $\pm$ 5%
Aperture, F/#	2.3 $\pm$ 5%
IR Filter	No
Field of View (FOV)	146° diagonal
	119° horizontal
	93° vertical
TV Distortion	< -22.9%

## BOM

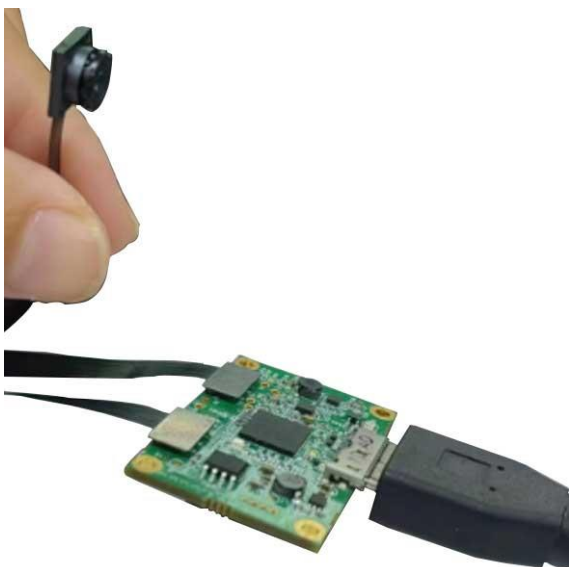
#	Items	QTY
1	LI-OV580-ST-AXT V1.2	1
2	LI-OG01A1B-MIPI-146D V1.0	2
3	USB 3.0 cable	1



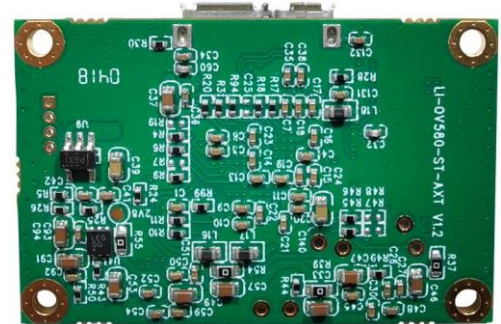
## KEY SPECIFICATIONS

General Behavior	
Video Resolution @ Frame Rate	640 x 480 @ 30, 60, 120 or 240fps (Default, Dual camera, 2 x 320 x 480) or 1280 x 1024 @ 30fps (Optional, Dual camera, 2 x 640 x 1024)
Interface (Optical)	
IR Filter	No
Sensor	OMNIVISION b&w CMOS 1.3MP Image Sensor OG01A1B
Optical Format	1/5"
Resolution	1280 (H) x 1024 (V) (active pixels)
Color / Mono	Monochrome
Pixel Size	2.2 x 2.2 $\mu\text{m}$
Interface (Electrical)	
Interface	USB 3.0
Supply Voltage	USB 3.0 + 5 VDC power source
Power Consumption	Approximately 162 mA @ 5 VDC (640 x 480 @ 60 fps)
Interface (Mechanical)	
Sizes	LI-OV580-ST-AXT: 40.4 (L) x 26.0 (W) mm LI-OG01A1B-MIPI-146D: 307.25(L) x 8.50 (W) mm
Weight	~ 7.6 g (1 x LI-OV580-ST-AXT + 2 x LI-OG01A1B-MIPI-146D)

### Capture Direction



# LI-OV580-ST-AXT



## INTERFACES (To CAM)

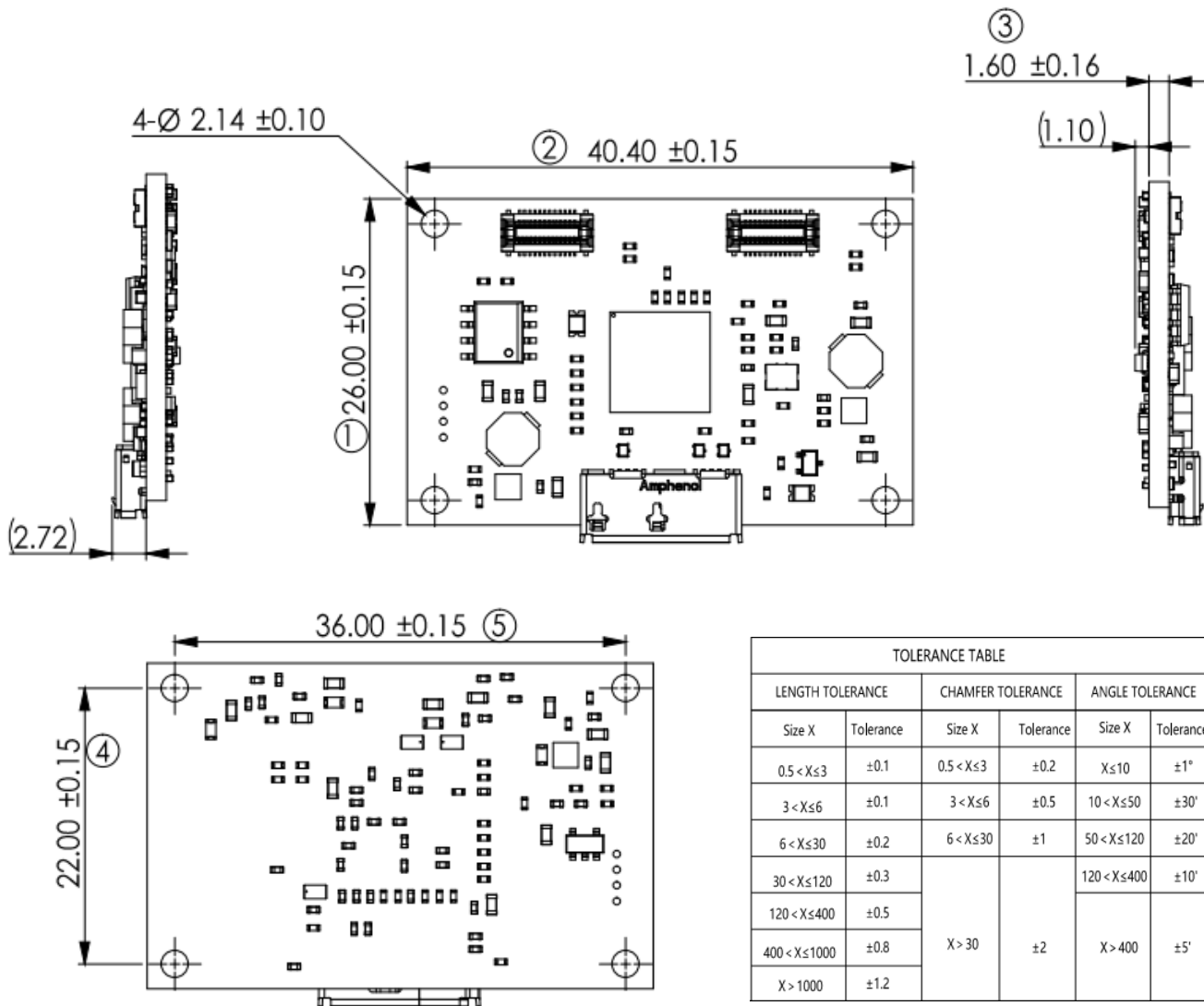
### Interface J6 & J2

- Part#: AXT524124
- Number of Positions: 24
- Number of Rows: 2
- Pitch: 0.40 mm



# LI-OV580-ST-AXT

## DIMENSIONS



TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
$0.5 < X \leq 3$	$\pm 0.1$	$0.5 < X \leq 3$	$\pm 0.2$	$X \leq 10$	$\pm 1^\circ$
$3 < X \leq 6$	$\pm 0.1$	$3 < X \leq 6$	$\pm 0.5$	$10 < X \leq 50$	$\pm 30'$
$6 < X \leq 30$	$\pm 0.2$	$6 < X \leq 30$	$\pm 1$	$50 < X \leq 120$	$\pm 20'$
$30 < X \leq 120$	$\pm 0.3$	$X > 30$	$\pm 2$	$120 < X \leq 400$	$\pm 10'$
$120 < X \leq 400$	$\pm 0.5$			$X > 400$	$\pm 5'$
$400 < X \leq 1000$	$\pm 0.8$				
$X > 1000$	$\pm 1.2$				

### NOTE:

- Other unmarked tolerances refer to the Tolerance table.
- All materials are compliant with RoHS & Reach requirements.
- $\otimes$  marked are important sizes.

Unit: mm

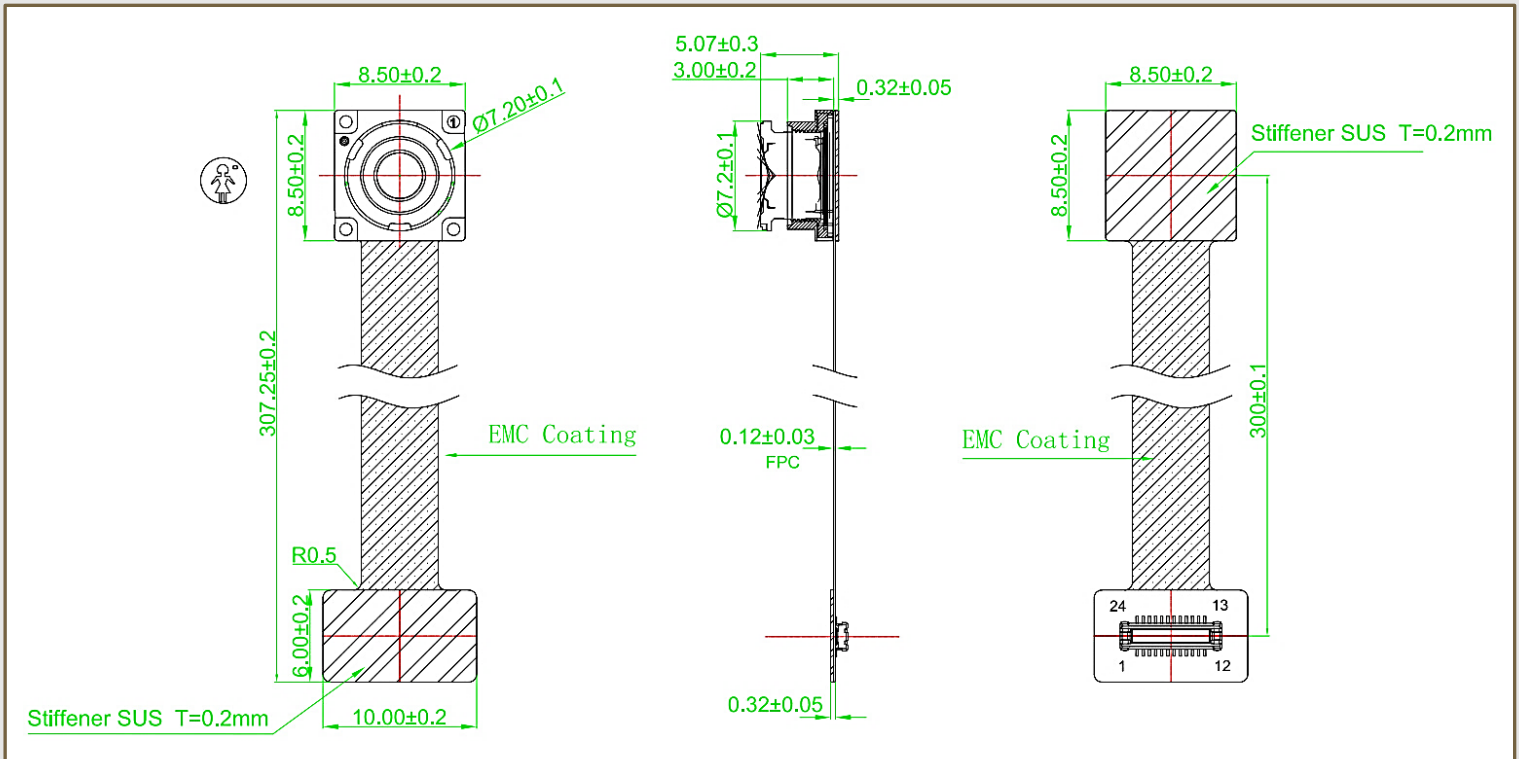
# LI-OG01A1B-MIPI-146D



Camera

Connector (To Board)

## MECHANIC DIAGRAM



No.	Item	QTY	Description
1	FPC	1	LI-OG01A1B-MIPI-146D V1.0
2	Sensor	1	OG01A1B
3	Connector	1	AXT624124

### NOTE:

- Basic tolerance:  $\pm 0.1$  mm
- Label with “\*”: important dimension
- Image direction register uses default settings

Unit: mm

## ● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	14 Sep 2023
1.1	<ol style="list-style-type: none"><li>1. Change the video Resolution @ Frame Rate.</li><li>2. Updated logo.</li></ol>	20 Dec 2024

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