



LI-AR0234CS-STEREO-GMSL2-xx



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INTRODUCTION

The LI-AR0234CS-STEREO-GMSL2-xx is equipped with ON Semiconductor 2.3MP CMOS digital image sensor AR0234CS, capable of producing clear, low noise images in both low-light and bright scenes. This stereo camera outputs 1920 × 1200 RAW data from each sensor.

SPECIFICATIONS

Sensor	ON Semiconductor 2.3MP CMOS Image Sensor AR0234CS
QTY of Sensor	2
Optical Format	1/2.6"
Resolution	1920 (H) × 1200 (V) (active pixels)
Pixel Size	3.0 × 3.0 μm
Output Format	10-bit RAW
Baseline	150.00 ± 0.5 mm
Color / Mono	Color sensor
Frame Rate	60 fps @ 1920 × 1200
Shutter	Global shutter
Serializer	Maxim MAX9295D
Power Supply Range	9 ~ 19 VDC
IMU	Included
FAKRA Connector	FAKRA Z TYPE
IP Rating	TBD
Power Consumption	86 mA @ 12 VDC (7.9 fps @ 3840 × 1200)
Operating Temp	-20°C ~ +50°C
Storage Temp	-40°C ~ +70°C
Weight	~ 204 g
Size	180.0 (L) × 25.0 (W) × 44.33 (D) mm

APPLICATIONS

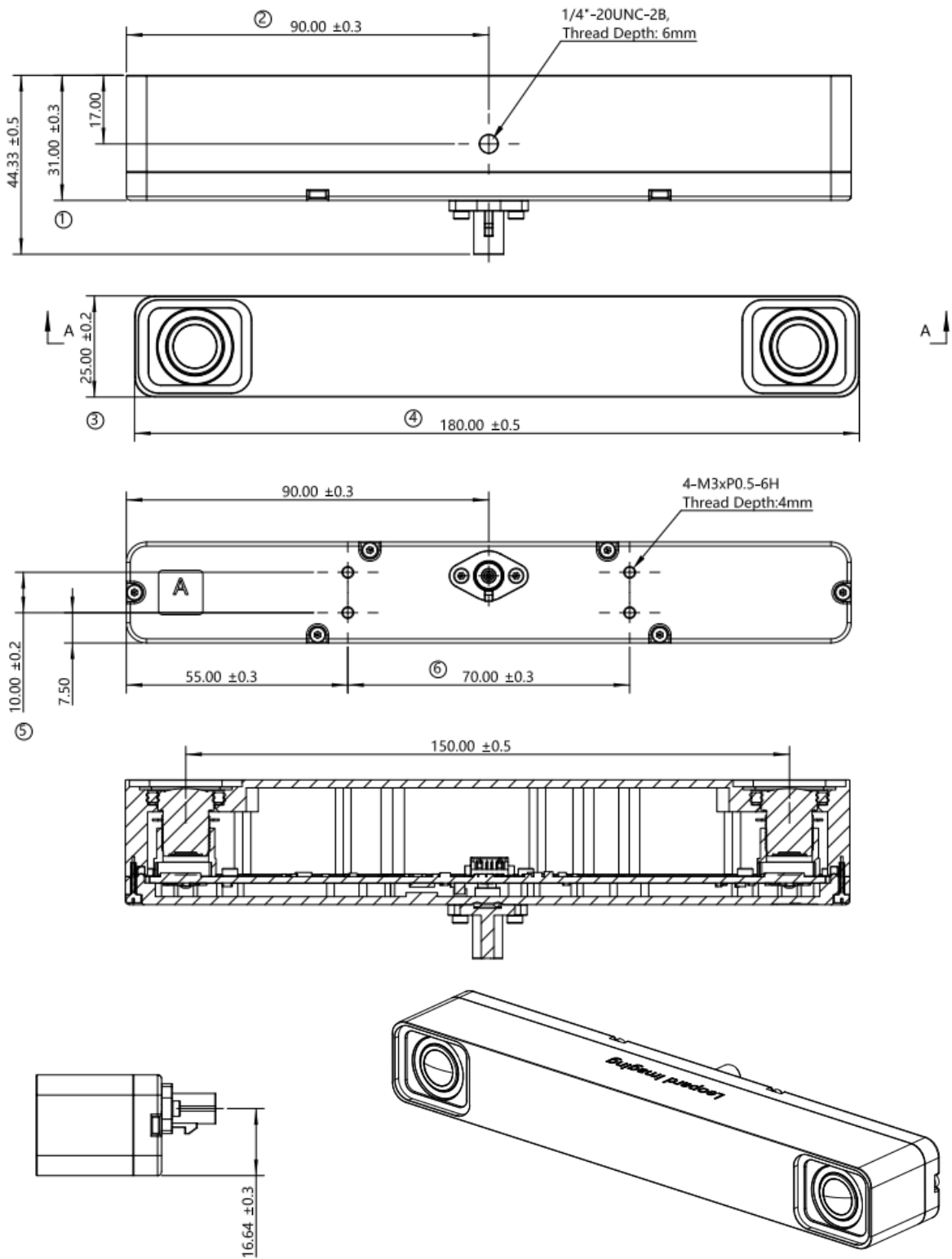
- Bar Code Scanner
- 3D Scanning
- Positional Tracking
- Iris Scanning
- Machine Vision
- Augmented Reality
- Virtual Reality
- Biometrics
- Gesture Recognition
- Depth Sensing

PART NUMBER & MPN

Part#	LI-AR0234CS-STEREO-GMSL2-xx <ul style="list-style-type: none"> • LI-AR0234CS-STEREO-GMSL2-20 • LI-AR0234CS-STEREO-GMSL2-30 • LI-AR0234CS-STEREO-GMSL2-40 • LI-AR0234CS-STEREO-GMSL2-50
MPN (Manufacturer Part Number)	LI-AR0234CS-STEREO-GMSL2-xx-Vy.y <ul style="list-style-type: none"> • LI-AR0234CS-STEREO-GMSL2-20-V1.0 • LI-AR0234CS-STEREO-GMSL2-30-V1.0 • LI-AR0234CS-STEREO-GMSL2-40-V1.0 • LI-AR0234CS-STEREO-GMSL2-50-V1.0



DIMENSIONS: LI-AR0234CS-STEREO-GMSL2-xx (20)

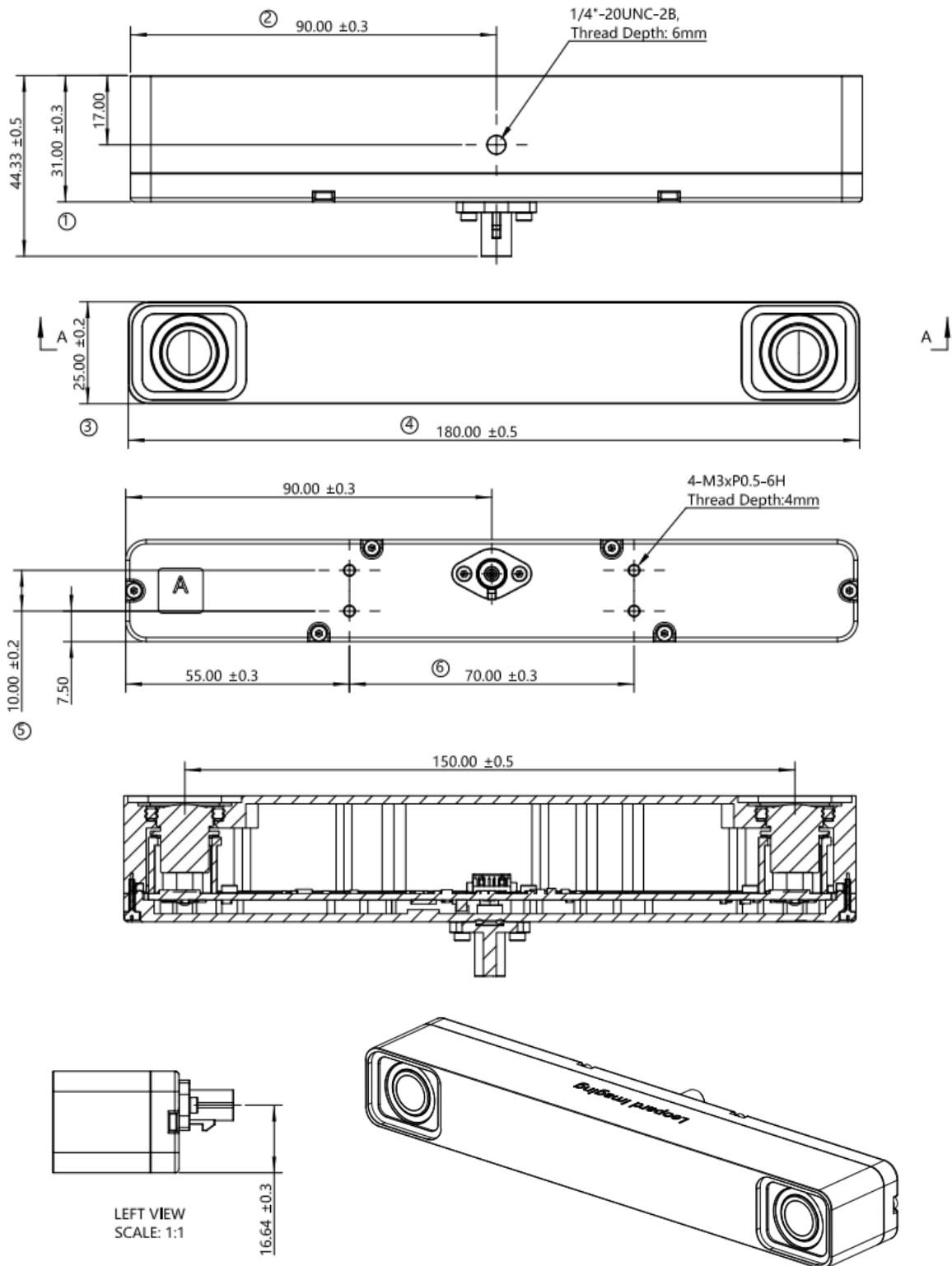


NOTE:

- Other unmarked tolerances are ± 0.3 mm.
- \otimes marked are important sizes.
- For unmarked sizes, refer to 3D model.

Unit: mm

DIMENSIONS: LI-AR0234CS-STEREO-GMSL2-xx (30 / 40 / 50)



NOTE:

- Other unmarked tolerances are ±0.3 mm.
- ⊗ marked are important sizes.
- For unmarked sizes, refer to 3D model.

Unit: mm

DEPTH PERFORMANCE

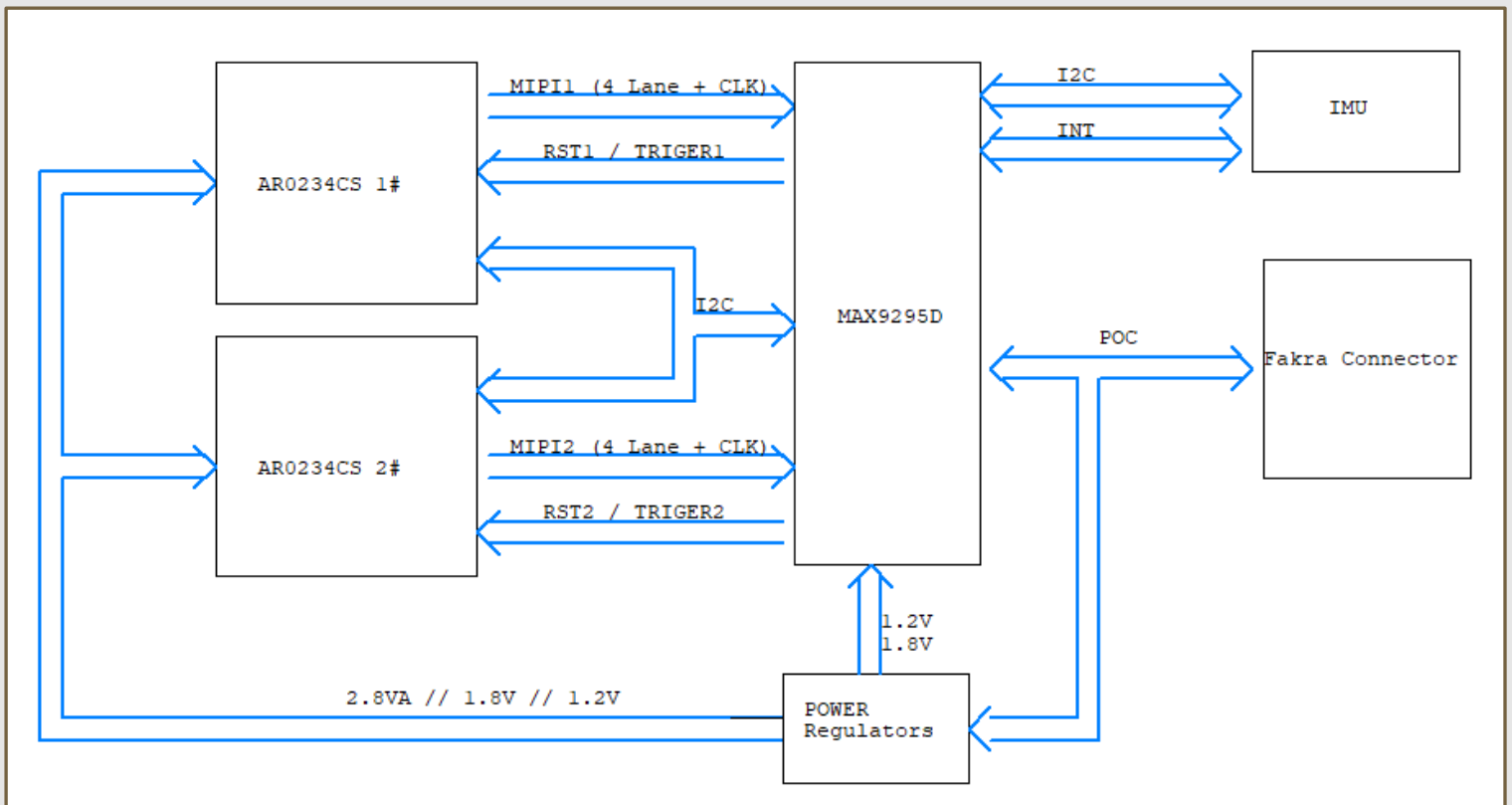
Metric	Spec Limit(s)
Z-Accuracy	±2% at 6 m distance at 80% depth FOV
Z-STD	±2% at 6 m distance at 80% depth FOV
Z-Distortion	±2% at 6 m distance at 80% depth FOV
Z-Fill-Rate	±0.1% at 6 m distance at 80% depth FOV

DEFAULT IMAGING DIRECTION

- The logo "Leopard Imaging" is on the TOP.

TOP (Default Imaging Direction)

BLOCK DIAGRAM



ORDERING INFORMATION

LI-AR0234CS-STEREO-GMSL2-xx refers:

- LI-AR0234CS-STEREO-GMSL2-20, thread lens, without filter and glass cover
- LI-AR0234CS-STEREO-GMSL2-30, AA lens, with 650 nm IR cut filter, without glass cover
- LI-AR0234CS-STEREO-GMSL2-40, AA lens, without filter and glass cover
- LI-AR0234CS-STEREO-GMSL2-50, AA lens, with dual band filter, without glass cover

LI-AR0234CS-STEREO-GMSL2-20	LI-AR0234CS-STEREO-GMSL2-30
<p>Technical drawing of the LI-AR0234CS-STEREO-GMSL2-20 lens. It shows a lens with a total length of 16.83 mm. The front element has a diameter of 14 mm. The field of view (FOV) is 147.5° (D) / 121.5° (H) / 73.6° (V). The lens is mounted on an M12x0.5-6g thread. The image plane is located 11.2 mm from the back of the lens. The lens has a focal length (EFL) of 2.8 mm and an aperture of F/2.0. The drawing also shows the back focal length (BFL) and front focal length (FFL) with and without a 0.4 C.G. filter.</p>	<p>Technical drawing of the LI-AR0234CS-STEREO-GMSL2-30 lens. It shows a lens with a total length of 16.83 mm. The front element has a diameter of 14 mm. The field of view (FOV) is 147.5° (D) / 121.5° (H) / 73.5° (V). The lens is mounted on an 1x17 mm Active Alignment (AA) mount. The image plane is located 9.26 mm from the back of the lens. The lens has a focal length (EFL) of 2.8 mm and an aperture of F/2.0. The drawing also shows the back focal length (BFL) and front focal length (FFL) with and without a 0.3 Filter+0.4C.G. filter.</p>
Lens EFL: 2.8 mm	Lens EFL: 2.8 mm
Aperture, F/#: 2.0	Aperture, F/#: 2.0
Field of View (FOV): 147.5° (D) / 121.5° (H) / 73.6° (V)	Field of View (FOV): 147.5° (D) / 121.5° (H) / 73.5° (V)
Optical Distortion: < -65.3%	Optical Distortion: < -65.3%
Relative Illumination: > 40%	Relative Illumination: > 30%
IR Filter: No	IR Filter: 650 nm IR cut filter
Glass Cover: No	Glass Cover: No
Lens Mount: M12 × 0.5	Lens Mount: Active Alignment (AA)
MPN: LI-AR0234CS-STEREO-GMSL2-20-V1.0	MPN: LI-AR0234CS-STEREO-GMSL2-30-V1.0

LI-AR0234CS-STEREO-GMSL2-40	LI-AR0234CS-STEREO-GMSL2-50
<p>Technical drawing of the LI-AR0234CS-STEREO-GMSL2-40 lens. It shows a lens with a total length of 16.83 mm. The front element has a diameter of 14 mm. The field of view (FOV) is 147.5° (D) / 121.5° (H) / 73.5° (V). The lens is mounted on an 1x17 mm Active Alignment (AA) mount. The image plane is located 9.26 mm from the back of the lens. The lens has a focal length (EFL) of 2.8 mm and an aperture of F/2.0. The drawing also shows the back focal length (BFL) and front focal length (FFL) with and without a 0.3 Filter+0.4C.G. filter.</p>	<p>Technical drawing of the LI-AR0234CS-STEREO-GMSL2-50 lens. It shows a lens with a total length of 16.83 mm. The front element has a diameter of 14 mm. The field of view (FOV) is 147.5° (D) / 121.5° (H) / 73.5° (V). The lens is mounted on an 1x17 mm Active Alignment (AA) mount. The image plane is located 9.26 mm from the back of the lens. The lens has a focal length (EFL) of 2.8 mm and an aperture of F/2.0. The drawing also shows the back focal length (BFL) and front focal length (FFL) with and without a 0.3 Filter+0.4C.G. filter. A laser engraving (white) is indicated on the lens.</p>
Lens EFL: 2.8 mm	Lens EFL: 2.8 mm
Aperture, F/#: 2.0	Aperture, F/#: 2.0
Field of View (FOV): 147.5° (D) / 121.5° (H) / 73.5° (V)	Field of View (FOV): 147.5° (D) / 121.5° (H) / 73.5° (V)
Optical Distortion: < -65.3%	Optical Distortion: < -65.3%
Relative Illumination: > 30%	Relative Illumination: > 30%
IR Filter: No	IR Filter: Visible + 850 nm
Glass Cover: No	Glass Cover: No
Lens Mount: Active Alignment (AA)	Lens Mount: Active Alignment (AA)
MPN: LI-AR0234CS-STEREO-GMSL2-40-V1.0	MPN: LI-AR0234CS-STEREO-GMSL2-50-V1.0

USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-AR0234CS-STEREO-GMSL2-xx can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-AR0234CS-STEREO-GMSL2-xx**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Global shutter
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 299 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 3840 × 1200 @ 7.9 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-AR0234CS-STEREO-GMSL2-xx	1
2	LI-GMSL2-USB	1
3	3-Meter Fakra Cable	1
4	12 VDC Power Supply	1
5	USB3.0 Cable	1

SDK SUPPORTED

- Camera Tool Source Code in C#
- Capture & Display
- Register Access Function

● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	19 May 2022
1.1	Updated IP rating.	01 Aug 2022

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