LI-AR0234CS-STEREO-GMSL2-30

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INTRODUCTION

The LI-AR0234CS-STEREO-GMSL2-30 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
Recommended Working Distance	1.0 ~ 8.0 m
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	IP65
Power Consumption	86 mA @ 12 VDC (7.9 fps @ 3840 × 1200)
Operating Temp	-20℃ ~ +50℃
Storage Temp	-40℃ ~ +70℃
Weight	~ 204 g
Size	180.0 (L) × 25.0 (W) × 44.33 (D) mm
Part#	LI-AR0234CS-STEREO-GMSL2-30
MPN (Manufacturer Part Number)	LI-AR0234CS-STEREO-GMSL2-30-V1.0

APPLICATIONS

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

LENS SPECIFICATIONS

Focal Length	2.8 mm
Aperture, F/#	2.0
Field of View (FOV)	147.5° diagonal
	121.5° horizontal
	73.5° vertical
Optical Distortion	< -65.3%
Relative Illumination	> 30%
Glass Cover	No
IR Filter	650 nm IR cut filter
Lens Mount	Active Alignment (AA)
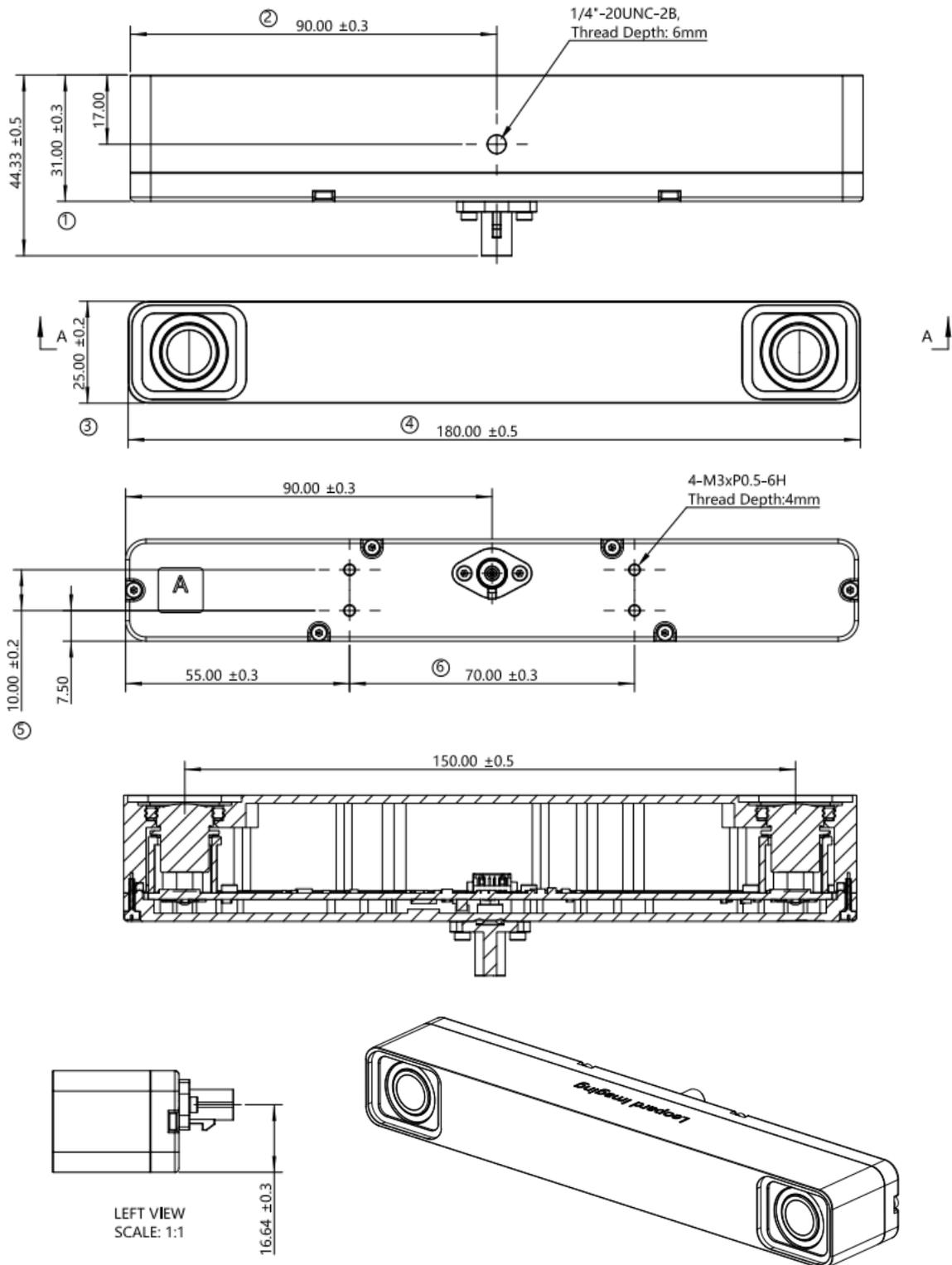
NOTE:

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

Unit: mm

DEPTH PERFORMANCE

- ## SPEC LIMIT (6-Meter Distance)

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

- ## DISTANCE & Z-ACCURACY

NOTE:

Z-STD, Z-DISTORTION, Z-Fill-Rate has little difference for the distance from 1.0 m to 8.0 m.

| Distance	Z-Accuracy
1 meter	< 0.33%
2 meters	< 0.66%
3 meters	< 0.99%
4 meters	< 1.32%
5 meters	< 1.65%
6 meters	< 2.00%
7 meters	< 2.31%
8 meters	< 2.64%

- ## MEASURED DATA GRAPH
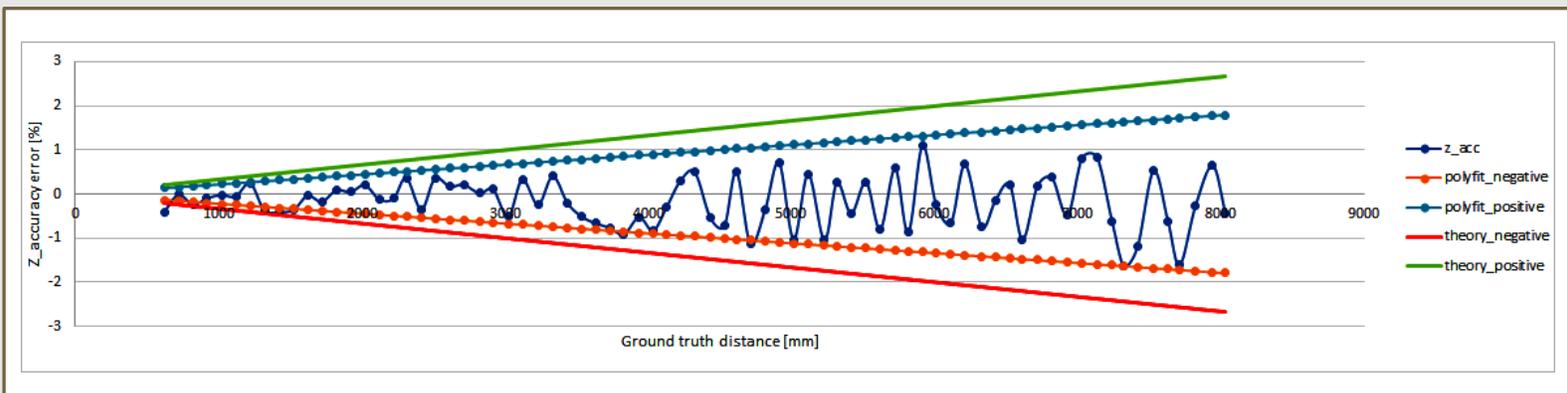
Test Condition:

1. Target to generate depth image: random_target.bmp (image on the right)

2. The same ROI is selected under all measured distances.
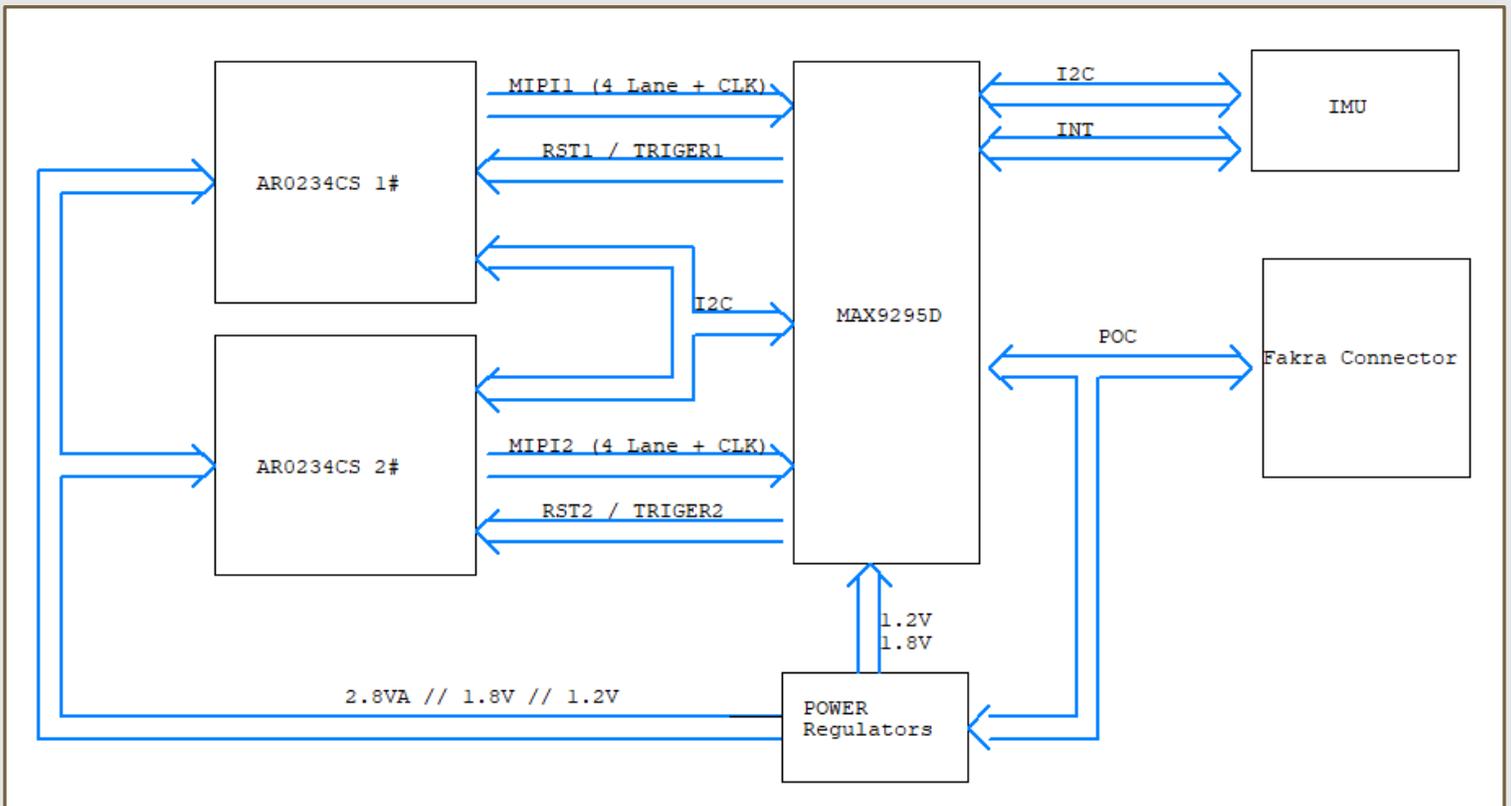
3. ROI size: 100 (W) x 50 (H) pixels
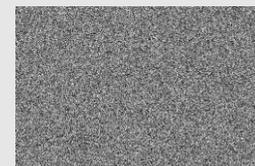
random_target.bmp

DEFAULT IMAGING DIRECTION

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

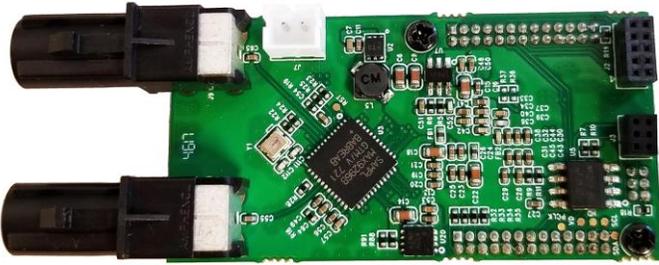TOP (Default Imaging Direction)
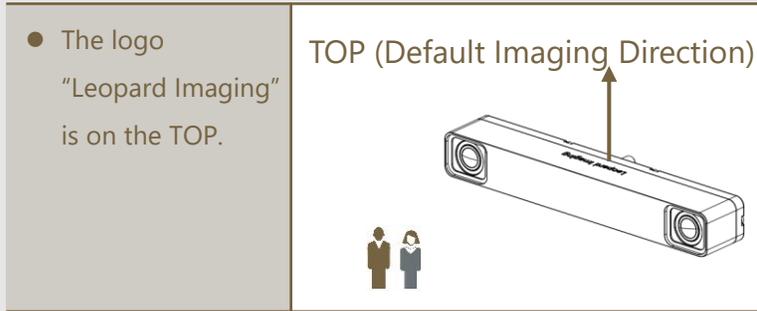
BLOCK DIAGRAM
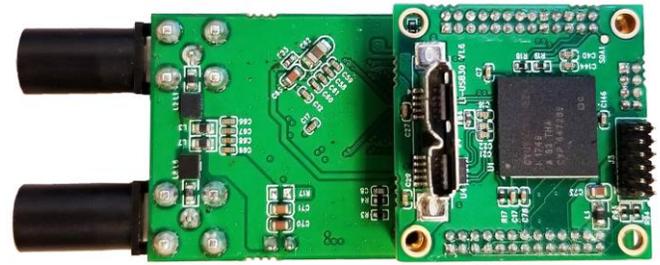
USB3.0 CAMERA KIT

LI-GMSL2-USB

Top View   Bottom View

LI-AR0234CS-STEREO-GMSL2-30 can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-AR0234CS-STEREO-GMSL2-30**

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 $\times$ 1200 @ 7.9 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers

12 VDC power supply for camera

BOM

#	Items	QTY
1	LI-AR0234CS-STEREO-GMSL2-30	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.	08 Sep 2022

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