



LEOPARD
IMAGING

LI-AR0820-GMSL3-110H



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INTRODUCTION

The LI-AR0820-GMSL3-110H is equipped with ON Semiconductor 8.3MP CMOS image sensor AR0820 and Maxim GMSL3 serializer. This camera outputs 3840 x 2160 RAW data.

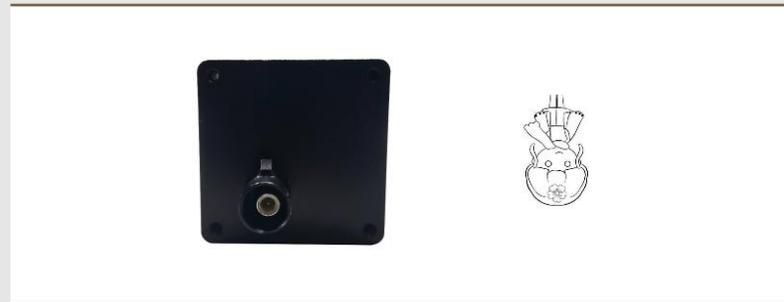
SPECIFICATIONS

Sensor	ON Semiconductor AR0820 8.3MP CMOS Sensor
Optical Format	1/2"
Resolution	3840 (H) x 2160 (V) (active pixels)
Pixel Size	2.1 x 2.1 μ m
Sensor	Color sensor
Output Format	12-bit / 14-bit / 16-bit / 20-bit / 24-bit RAW data
Maximum Frame Rate	40 fps @ 4K (3-exposure HDR) 30 fps @ 4K (4-exposure HDR)
HDR (High Dynamic Range)	Supported
Serializer	Maxim GMSL3 (12 Gbps)
GMSL Speed	12 Gbps Forward Channel
Power Supply Range	9 ~ 19 VDC
Connector	FAKRA Z TYPE
IP Rating	TBD
Power Consumption	85 mA @ 12 VDC (3848 x 2168 @ 16.7 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	TBD
Part#	LI-AR0820-GMSL3-110H

APPLICATIONS

- High Performance ADAS
- Autonomous Driving
- High Dynamic Range Imaging
- Robots

IMAGE ORIENTATION

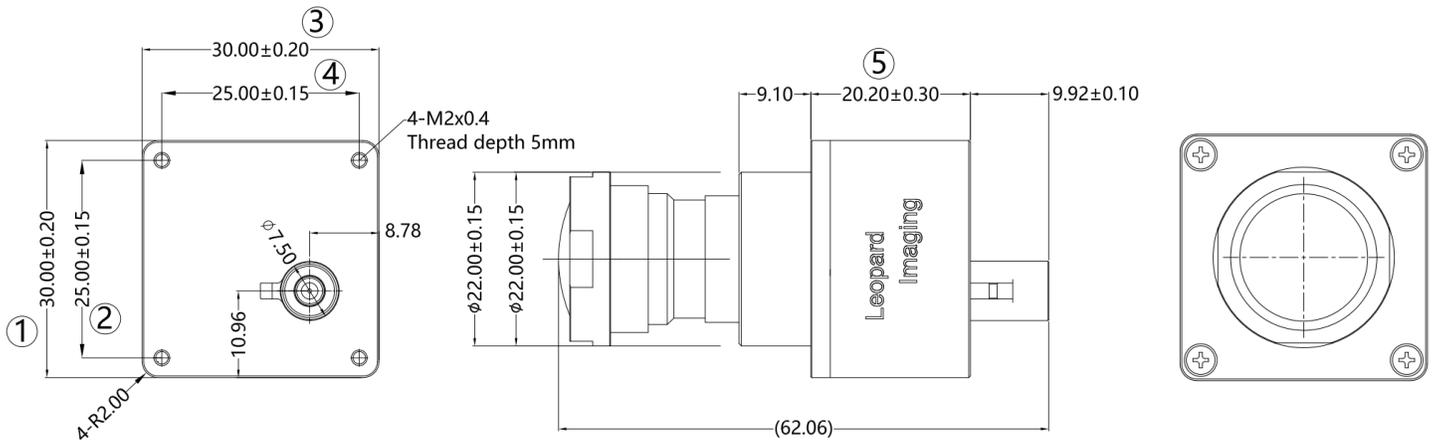


LENS SPECIFICATIONS

Focal Length	4.49 mm
Aperture, F/#	1.6
Field of View (FOV)	110° horizontal
Optical Distortion	-75% (Φ 10.285 mm)
Relative Illumination	64% (Φ 10.285 mm)
IR Cut Filter	650 nm IR cut filter
Lens Mount	M16 x 0.5



DIMENSIONS



NOTE:

- ⊗ marked are important sizes.
- All materials are compliant with RoHS requirements.
- Tolerances for others unmarked are ± 0.3 mm.

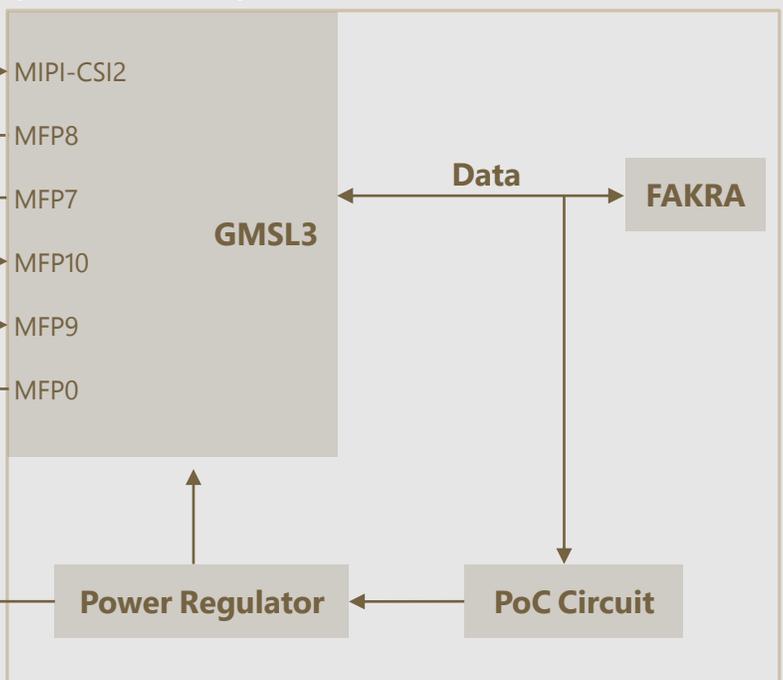
Unit: mm

PINOUT CONNECTIONS

(I2C:0x20 8-bit)

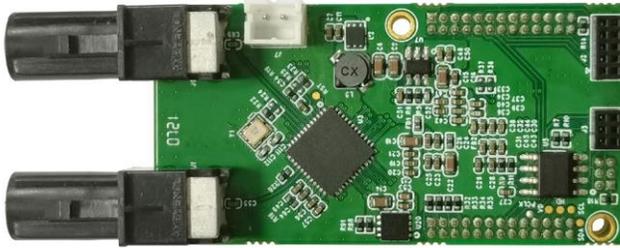


(I2C: 0x84 8-bit)

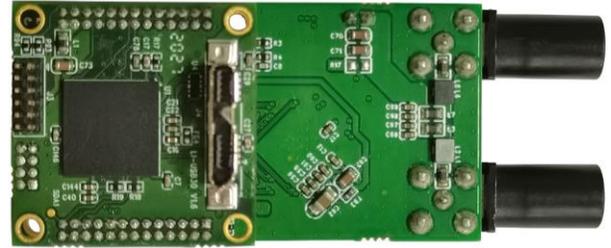


USB3.0 CAMERA KIT

LI-GMSL3-USB



Top View



Bottom View

LI-AR0820-GMSL3-110H can connect to LI-GMSL3-USB as a USB 3.0 camera.

Part#: **LI-USB30-AR0820-GMSL3-110H**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC Power Supply for camera
- Weight: TBD
- GMSL3 DeSerializer
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 3848 x 2168 @ 16.7 fps
- Power consumption: 85 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers

BOM

#	Items	QTY
1	LI-AR0820-GMSL3-110H	1
2	LI-GMSL3-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
0.1	Initial draft.	28 Oct 2022
0.2	Updated power consumption and temp.	12 Oct 2023
0.3	Updated imaging direction.	27 Dec 2027

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