



**LEOPARD**  
IMAGING

# LI-AR2020-GM2B-096H



**Address:**

910 Auburn Ct  
Fremont, CA 94538  
USA



**Phone:**

+1 (408)263-0988

**Fax:**

+1 (408)217-1960



**Sales:**

[sales@leopardimaging.com](mailto:sales@leopardimaging.com)

**Support:**

[support@leopardimaging.com](mailto:support@leopardimaging.com)

## INTRODUCTION

The LI-AR2020-GM2B-096H is equipped with ON Semiconductor 1/1.8-inch 20 Mp CMOS sensor AR2020 which features advanced 1.4  $\mu\text{m}$  pixel stacked BSI technology and Maxim GMSL2 serializer MAX96717. This camera outputs 5120 x 3840 RAW data.

## SPECIFICATIONS

|                              |                                               |
|------------------------------|-----------------------------------------------|
| Sensor                       | ON Semiconductor 20 Mp CMOS sensor AR2020     |
| Optical Format               | 1/1.8"                                        |
| Resolution                   | 5120 (H) x 3840 (V) (active pixels)           |
| Pixel Size                   | 1.4 $\mu\text{m}$ Back Side Illuminated (BSI) |
| Sensor                       | Color sensor                                  |
| Output Format                | 10-bit RAW data                               |
| Maximum Frame Rate           | 30 fps @ 5120 x 3840                          |
| HDR (High Dynamic Range)     | Supported                                     |
| LFM (LED Flicker Mitigation) | Supported                                     |
| Serializer                   | Maxim GMSL2 MAX96717                          |
| Power Supply Range           | 9 ~ 19 VDC                                    |
| Connector                    | FAKRA Z TYPE                                  |
| IP Rating                    | TBD                                           |
| Power Consumption            | 69 mA @ 12 VDC<br>(5120 x 3840 @ 8 fps)       |
| Operating Temp               | -30°C ~ +85°C                                 |
| Storage Temp                 | -40°C ~ +85°C                                 |
| Weight                       | ~ 46 g                                        |
| Part#                        | LI-AR2020-GM2B-096H                           |

## APPLICATIONS

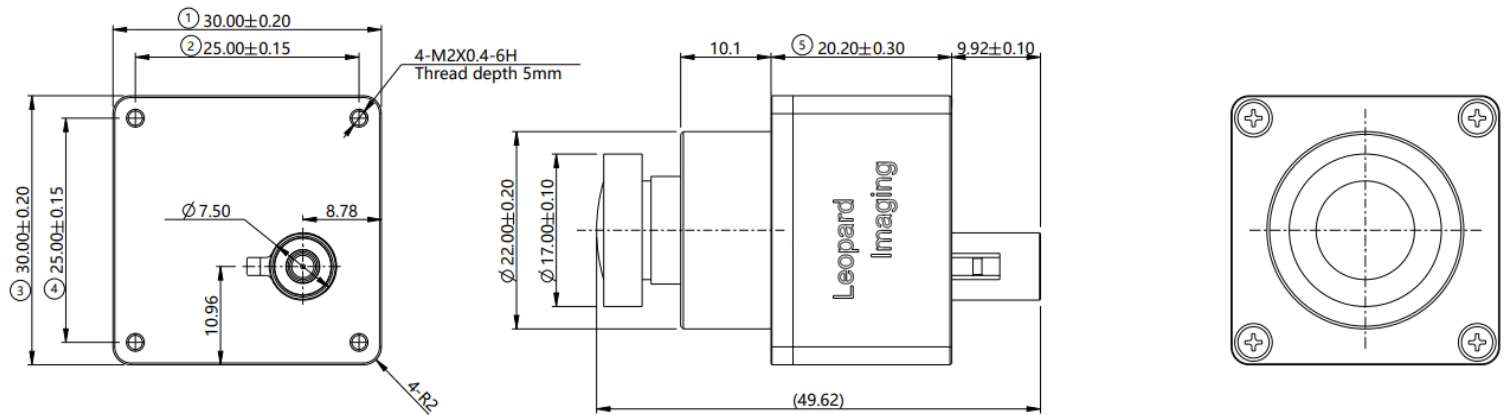
- Surveillance Camera
- Video Conferencing
- Machine Vision
- 3D and Stereo Imaging
- Barcode Scan

## Lens Specifications

|                     |                      |
|---------------------|----------------------|
| Focal Length        | 4.5 mm               |
| Aperture, F/#       | 2.8                  |
| Field of View (FOV) | 124° diagonal        |
|                     | 96° horizontal       |
|                     | 71° vertical         |
| Optical Distortion  | < -44%               |
| IR Filter           | 650 nm IR cut filter |
| Lens Mount          | M12 x P0.5           |



## DIMENSIONS



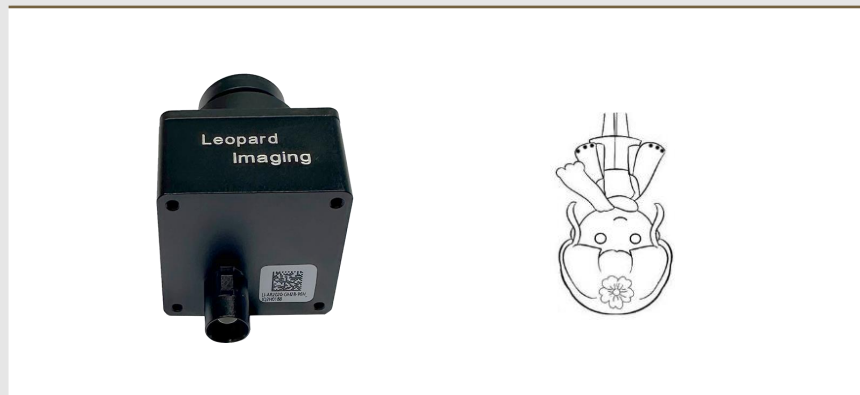
### NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked refer to the Tolerance table.
- All materials are compliant with RoHS & REACH requirements.

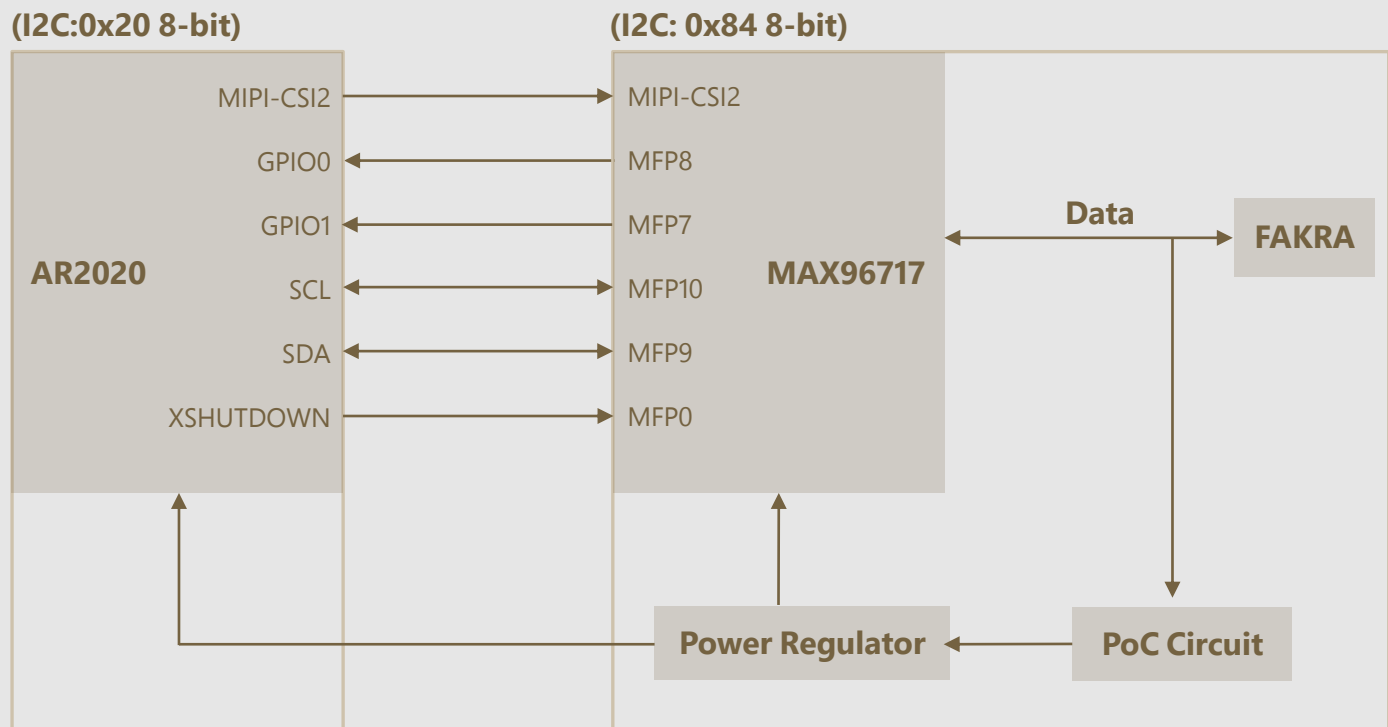
Unit: mm

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

## IMAGE ORIENTATION



## SYSTEM BLOCK DIAGRAM

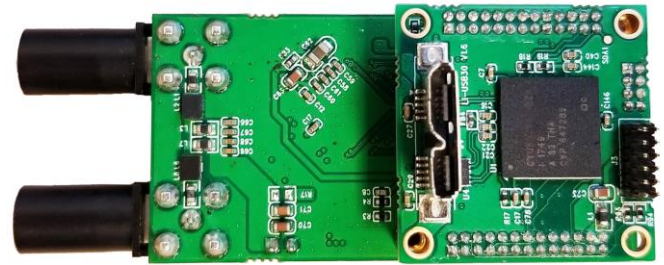


## USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-AR2020-GM2B-096H can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-AR2020-GM2B-096H**

### SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC Power Supply for camera
- Weight: TBD
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 5120 x3840 @ 8 fps
- Power consumption: 69 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers

### BOM

| # | Items               | QTY |
|---|---------------------|-----|
| 1 | LI-AR2020-GM2B-096H | 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 |
|----------|----------------|--------------|
| 0.1      | Initial draft. | 15 Apr 2025  |

910 Auburn Ct, Fremont, CA 94538, USA  
Phone: +1-408-263-0988  
Fax: +1-408-217-1960  
Email: [sales@leopardimaging.com](mailto:sales@leopardimaging.com)  
Website: [www.leopardimaging.com](http://www.leopardimaging.com)

