



LEOPARD
IMAGING

LI-VENUS-ISX031-GM2B-195H



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INTRODUCTION

The LI-VENUS-ISX031-GM2B-195H is equipped with Sony Diagonal 7.45 mm (Type 1/2.42) CMOS image sensor ISX031 and Maxim GMSL2 serializer MAX96717. This camera outputs YUV data.

SPECIFICATIONS

Sensor	Sony Diagonal 7.45 mm CMOS Image Sensor ISX031
Optical Format	1/2.42"
Resolution	1937 (H) x 1553 (V) (active pixels)
Pixel Size	3.0 x 3.0 μ m
Output Format	YUV422
Color / Mono	Color sensor
Frame Rate	30 fps @ 1920 x 1536 (based on ISP)
HDR (High Dynamic Range)	Supported
LFM (LED Flicker Mitigation)	Supported
Serializer	Maxim MAX96717
IP Rating	IP69K
Power Supply Range	8 ~ 17 VDC
Connector	FAKRA Z TYPE
Power Consumption	88 mA @ 12 VDC (1920 x 1536 @ 30 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	~ 33 g
Part#	LI-VENUS-ISX031-GM2B-195H

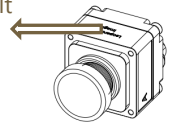
APPLICATIONS

- Automotive
 - ◆ Autonomous Driving
 - ◆ Assisted Driving
 - ◆ Digital Video Recording
 - ◆ Machine Vision

DEFAULT IMAGING DIRECTION

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

TOP (Default Imaging Direction)

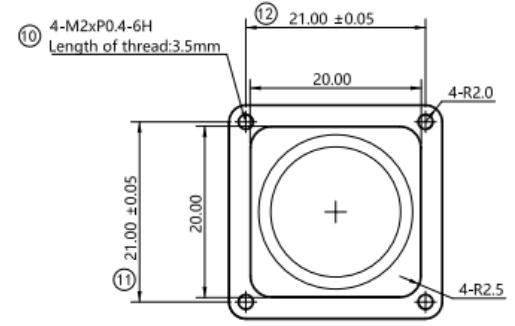
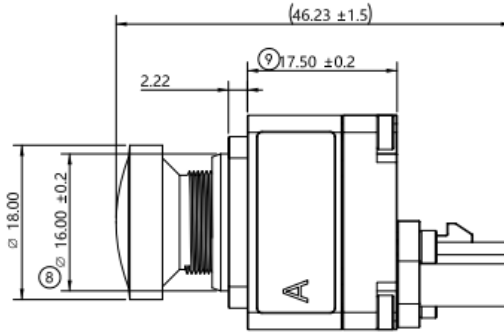
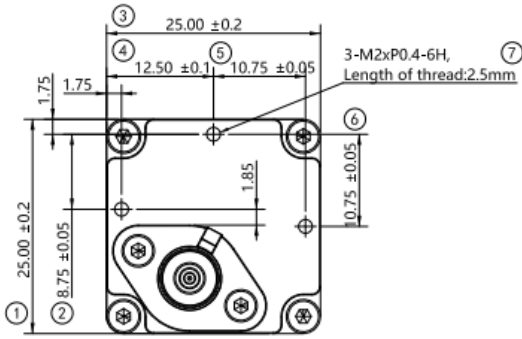


LENS SPECIFICATIONS

Effective Focal Length	1.51 mm \pm 5%
Aperture, F/#	2.0 \pm 5%
Field of View (FOV)	195.9° \pm 3° horizontal (y = 2.880 mm)
	154.5° \pm 3° vertical (y = 2.304 mm)
	210.4° \pm 3° diagonal (y = 3.025 mm)
F- θ Distortion	-154.2% (y = 3.025 mm)
Relative Illumination	37% (y = 3.025 mm)
IR Filter	650 nm IR cut filter
Lens Mount	M12 x P0.5



DIMENSIONS



TOLERANCE TABLE		
Size X (mm)	Tolerance (mm)	Angle Tolerance (°)
0.5 < X ≤ 3	±0.1mm	±0.05°
3 < X ≤ 6	±0.1mm	±0.05°
6 < X ≤ 30	±0.2mm	±0.05°
30 < X ≤ 120	±0.3mm	±0.05°
120 < X ≤ 400	±0.5mm	±0.1°
400 < X ≤ 1000	±0.8mm	±0.1°
X > 1000	±1.2mm	±0.1°

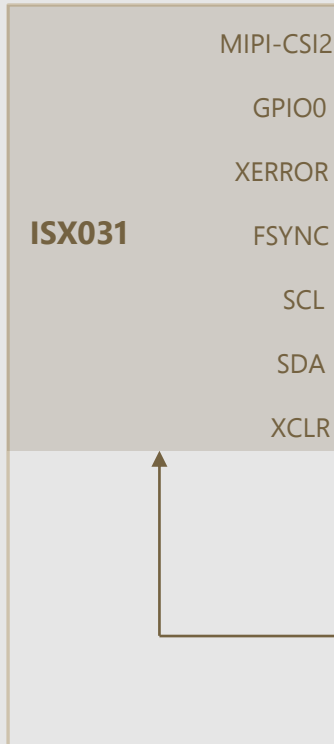
NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked – refer to the Tolerance Table.

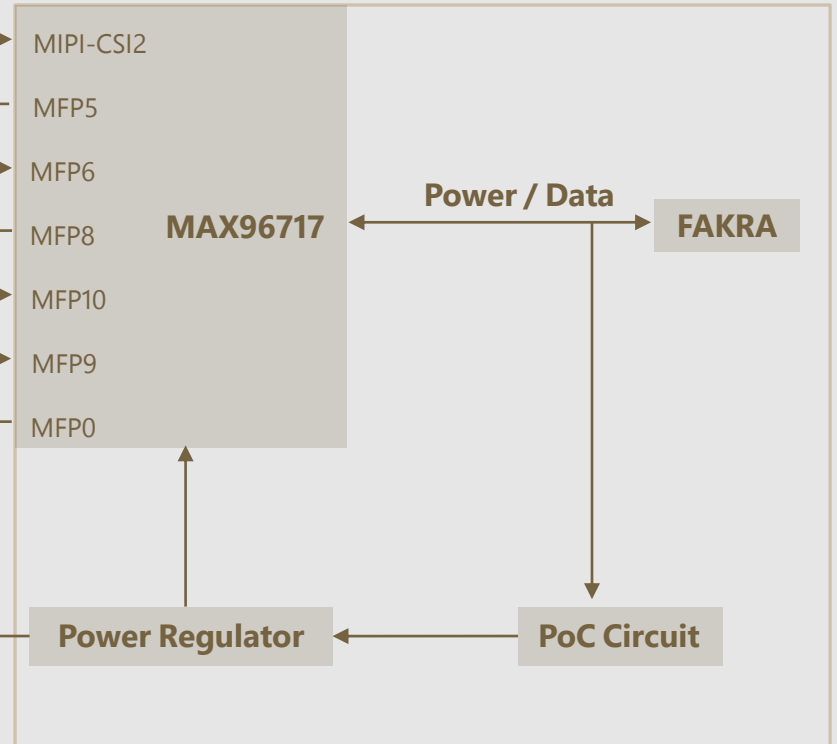
Unit: mm

PINOUT CONNECTIONS

(I2C: 0x34 8-bit)



(I2C: 0x84 8-bit)



Power / Data

Power Regulator

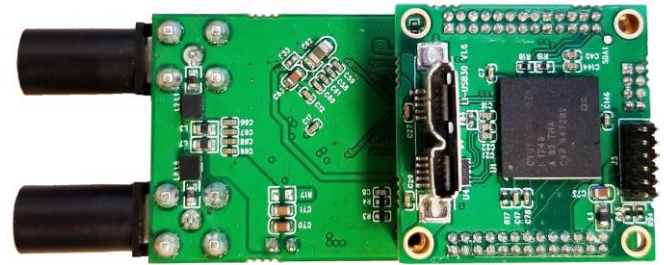
PoC Circuit

USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-VENUS-ISX031-GM2B-195H can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-VENUS-ISX031-GM2B-195H**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 162 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 1920 x 1536 @ 30 fps
- Power consumption: 88 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-VENUS-ISX031-GM2B-195H	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.	22 Sep 2023
1.1	Updated Output Format.	21 Mar 2024

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