



LI-VENUS-IMX623-GM2B-xxxH



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INTRODUCTION

The LI-VENUS-IMX623-GM2B-xxxH is equipped with Sony diagonal 7.45 mm (Type 1/2.42) CMOS solid-state RGGB image sensor IMX623 and Maxim GMSL2 serializer MAX96717. This camera outputs 12-bit / 14-bit / 16-bit / 20-bit RAW data.

SPECIFICATIONS

Sensor	Sony Diagonal 7.45 mm CMOS Solid-State RGGB Sensor IMX623
Optical Format	1/2.42"
Resolution	1937 (H) x 1553 (V) (active pixels)
Pixel Size	3.0 x 3.0 μ m
Output Format	12-bit / 14-bit / 16-bit / 20-bit RAW
Color / Mono	Color sensor
Maximum Frame Rate	60 fps @ 1936 x 1556
HDR (High Dynamic Range)	Supported
LFM (LED Flicker Mitigation)	Supported
Serializer	Maxim MAX96717
Lens	FOV H 60° / 118° / 195°
Power Supply Range	8 ~ 17 VDC
Connector	FAKRA Z TYPE
IP Rating	IP69K
Power Consumption	77 mA @ 12 VDC (30.2 fps @ 1920 x 1552)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	~ 34 g
Part#	LI-VENUS-IMX623-GM2B-xxxH

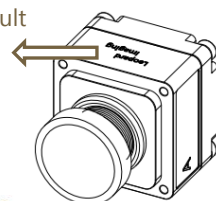
APPLICATIONS

- 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)



CABLE CONNECTOR

- Housing Connector
FAKRA Z Type
- Cable Length: 3 meters
- Cable Part#: FAK-SMZSMZ-3M



LI-VENUS-IMX623-GM2B-060H

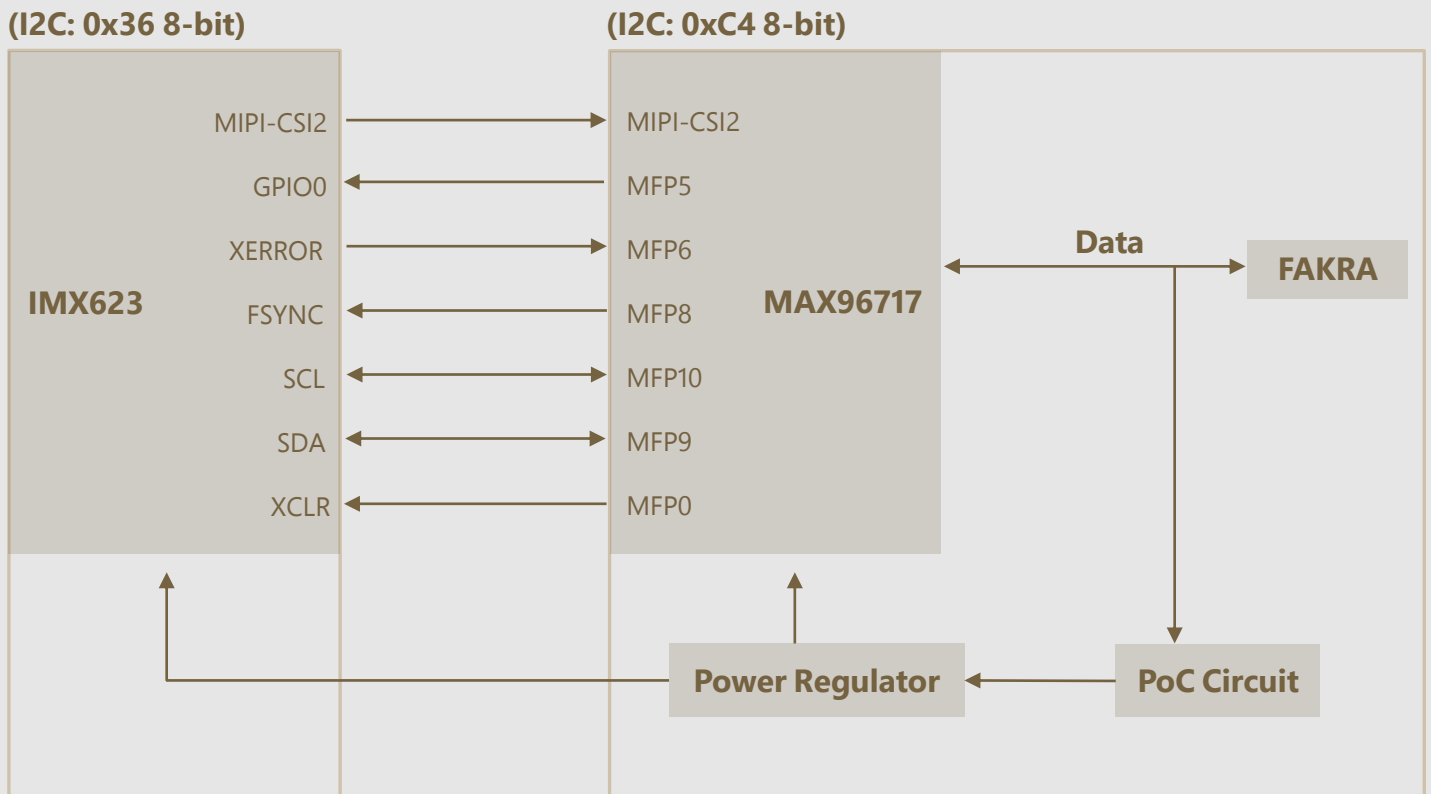


LI-VENUS-IMX623-GM2B-118H



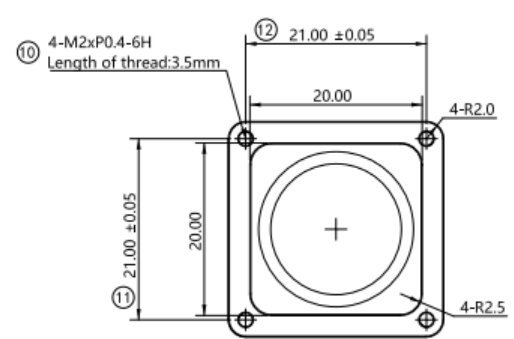
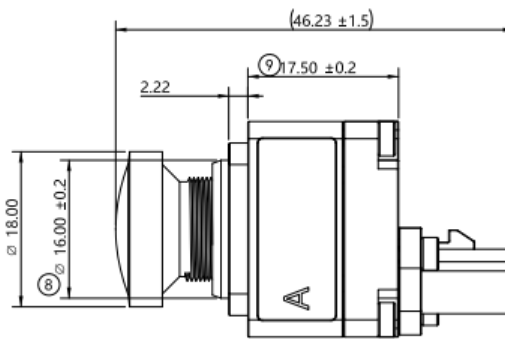
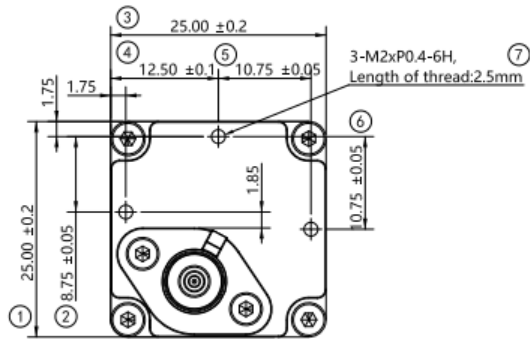
LI-VENUS-IMX623-GM2B-195H

PINOUT CONNECTIONS



TOLERANCE TABLE		
Size X (mm)	Tolerance (mm)	Angle Tolerance (°)
$0.5 < X \leq 3$	$\pm 0.1\text{mm}$	$\pm 0.05^\circ$
$3 < X \leq 6$	$\pm 0.1\text{mm}$	$\pm 0.05^\circ$
$6 < X \leq 30$	$\pm 0.2\text{mm}$	$\pm 0.05^\circ$
$30 < X \leq 120$	$\pm 0.3\text{mm}$	$\pm 0.05^\circ$
$120 < X \leq 400$	$\pm 0.5\text{mm}$	$\pm 0.1^\circ$
$400 < X \leq 1000$	$\pm 0.8\text{mm}$	$\pm 0.1^\circ$
$X > 1000$	$+1.2\text{mm}$	$+0.1^\circ$

DIMENSIONS: LI-VENUS-IMX623-GM2B-195H



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.
- All materials are compliant with RoHS requirements.

Unit: mm

ORDERING INFORMATION

NOTE:

xxxH refers to 060H (FOV H 60°), 118H (FOV H 118°) or 195H (FOV H 195°)

LI-VENUS-IMX623-GM2B-060H



Lens EFL: 5.83 mm $\pm$ 2%

Aperture, F/#: 1.8 $\pm$ 5%

Field of View (FOV): 60° horizontal

Optical Distortion: < -20.7% (2Y' = 6.826 mm)

TV Distortion: < -10.19% (2Y' = 6.826 mm)

Relative Illumination: 90% (2Y' = 6.826 mm)

IR Filter: 650 nm IR cut filter

Mount: M12

LI-VENUS-IMX623-GM2B-118H



Lens EFL: 3.021 mm $\pm$ 5%

Aperture, F/#: 2.0 $\pm$ 5%

Field of View (FOV): 118° horizontal

Optical Distortion: -62.41% $\pm$ 5% (f-tan θ)

Relative Illumination: > 45%

IR Filter: 700 nm IR cut filter

Mount: M12

LI-VENUS-IMX623-GM2B-195H



Lens EFL: 1.51 mm $\pm$ 5%

Aperture, F/#: 2.0 $\pm$ 5%

Field of View (FOV): 195.9° $\pm$ 3° horizontal (y = 2.880 mm)

F- θ Distortion: -154.2% (y = 3.025 mm)

Relative Illumination: 37% (y = 3.025 mm)

IR Filter: 650 nm IR cut filter

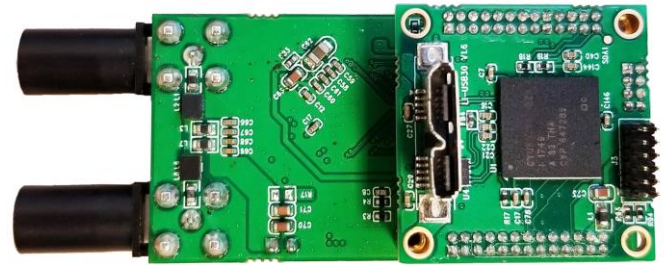
Mount: M12

USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-VENUS-IMX623-GM2B-xxxH can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-VENUS-IMX623-GM2B-xxxH**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 115 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 1920 x 1552 @ 30.2 fps
- Power consumption: 77 mA @ 12VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers

BOM

#	Items	QTY
1	LI-VENUS-IMX623-GM2B-xxxH	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.	15 Sep 2023

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