



**LEOPARD**  
IMAGING

# LI-VENUS-IMX623-FP3-195H-R1



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## INTRODUCTION

The LI-VENUS-IMX623-FP3-195H-R1 is equipped with Sony diagonal 7.45 mm (Type 1/2.42) CMOS solid-state RGGB image sensor IMX623 and FPD-Link III serializer TI953. This camera outputs 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 $\mu\text{m}$ x 3.0 $\mu\text{m}$
Output Format	12-bit / 14-bit / 16-bit / 20-bit / 24-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	TI953 FPD-Link III (DS90UB953-Q1)
Power Supply Range	8 ~ 17 VDC
Connector	FAKRA Z TYPE
IP Rating	IP67
Power Consumption	77 mA @ 12 VDC (1936 x 1552 @ 30 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	~ 32 g
Part#	LI-VENUS-IMX623-FP3-195H-R1

## APPLICATIONS

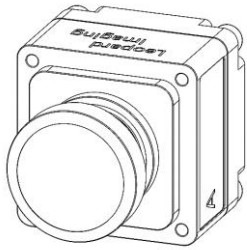
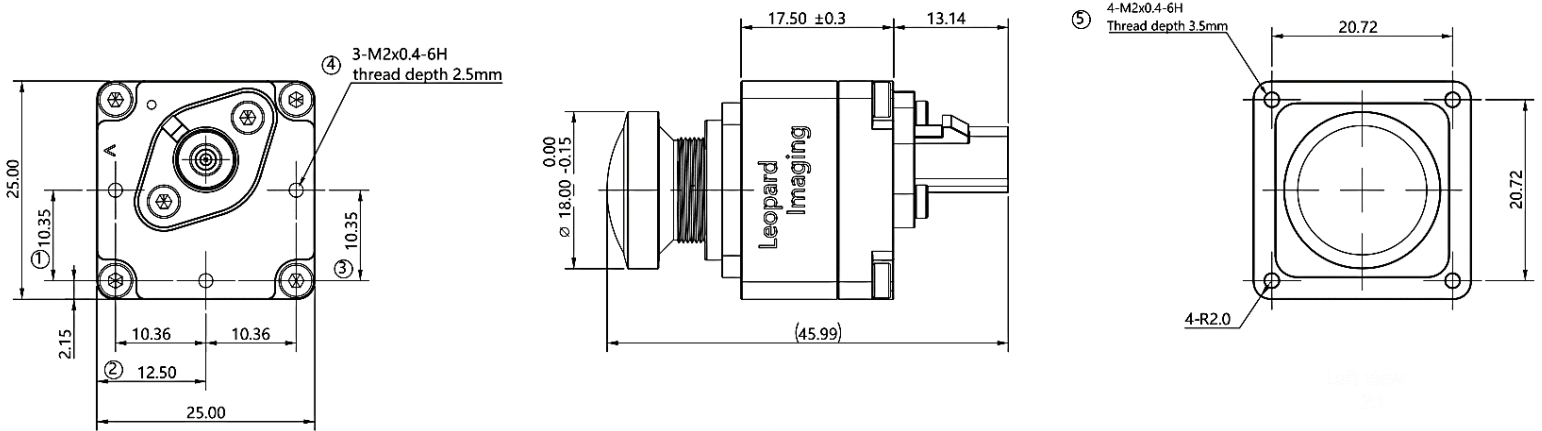
- Automotive
  - ◆ Autonomous Driving
  - ◆ Assisted Driving
  - ◆ Digital Video Recording
  - ◆ Machine Vision

## LENS SPECIFICATIONS

Effective Focal Length	1.51 mm $\pm$ 5%
Aperture, F/#	2.0 $\pm$ 5%
Field of View (FOV)	195° horizontal
F- $\theta$ 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



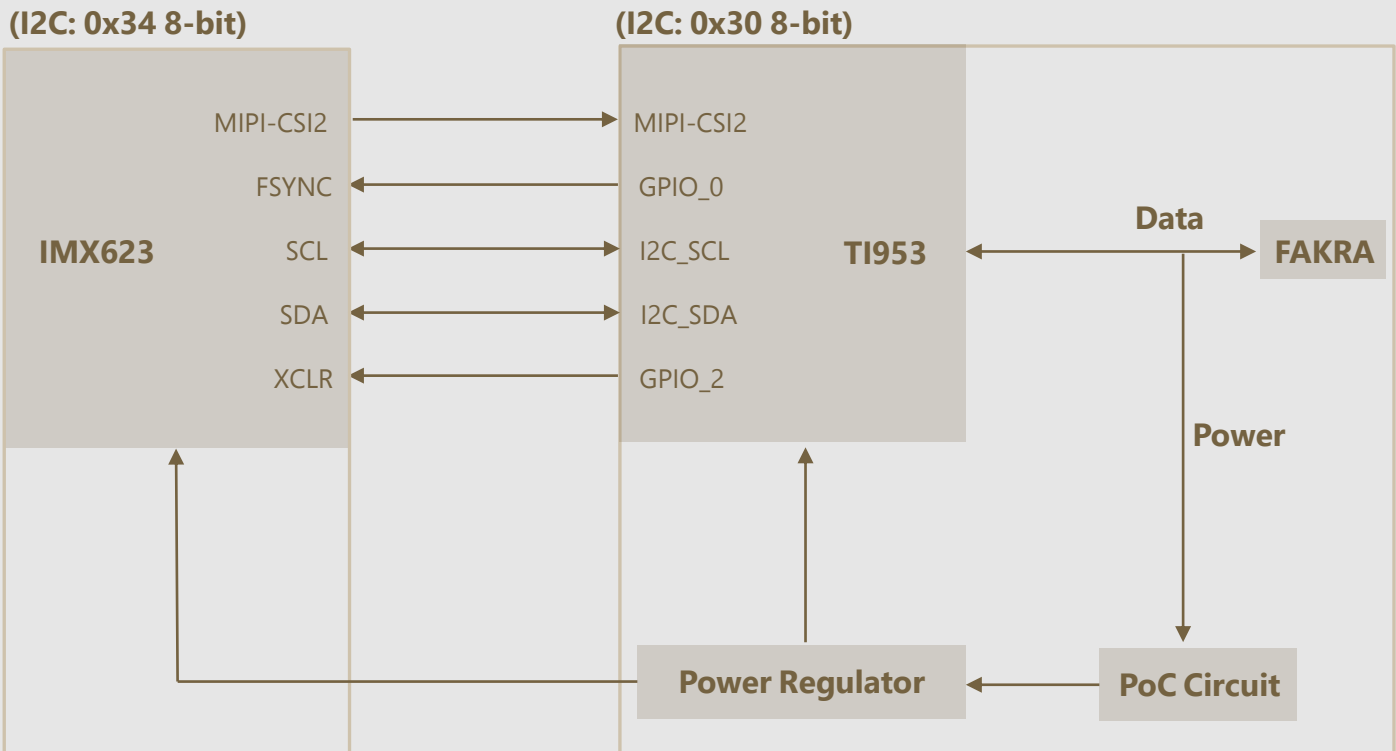
TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5 < X ≤ 3	±0.1	0.5 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30'
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20'
30 < X ≤ 120	±0.3			120 < X ≤ 400	±10'
120 < X ≤ 400	±0.5				
400 < X ≤ 1000	±0.8	X > 30	±2	X > 400	±5'
X > 1000	±1.2				

### NOTE:

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

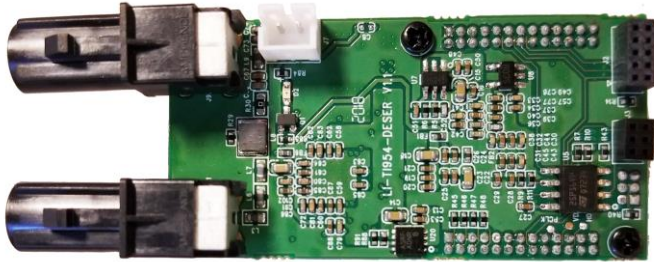
Unit: mm

# SYSTEM BLOCK DIAGRAM



## USB3.0 CAMERA KIT

LI-FPDLINKIII-USB



Top View



Bottom View

The LI-VENUS-IMX623-FP3-195H-R1 camera can connect to LI-FPDLINKIII-USB as a USB 3.0 camera.

Part#: **LI-USB30-VENUS-IMX623-FP3-195H-R1**

### SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC Power Supply for camera
- Weight: ~ 64 g (LI-FPDLINKIII-USB + LI-VENUS-IMX623-FP3-195H-R1 )
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 1936 x 1552 @ 30 fps
- Power consumption: 77 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers



### BOM

#	Items	QTY
1	LI-VENUS-IMX623-FP3-195H-R1	1
2	LI-FPDLINKIII-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.	12 Apr 2024

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