



**LEOPARD**  
IMAGING

# LI-VB1940-GM2C-119H



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## INTRODUCTION

The LI-VB1940-GM2C-119H is an RGB-IR active stereo camera, allowing for both day and night vision capabilities. It is equipped with two automotive 5.1 megapixel, global shutter RGB-IR image sensors, Maxim GMSL2 serializer, single IR illuminator and single IR dot projector. This stereo camera outputs RAW RGB-IR data.

## SPECIFICATIONS

Sensor	5.1MP Global Shutter RGB-IR Sensor
QTY of Sensor	2
Optical Format	1/2.5"
Pixel Size	2.25 $\mu\text{m}$ x 2.25 $\mu\text{m}$
Resolution	2560 (H) x 1984 (V)
Recommended Working Distance	0.5 ~ 8.0 m
Output Format	RAW RGB-IR, 12-bit / 10-bit / 8-bit
Baseline	150 mm
Color / Mono	RGB-IR
Maximum Frame Rate	60 fps @ full resolution
Shutter	Global shutter
Serializer	Maxim GMSL2
Power Supply Range	9 ~ 19 VDC
ISP	Not included
IP Rating	TBD
IR Illuminator	Included
IR Projector	Included
IMU	Included
FAKRA Connector	FAKRA Z TYPE
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 182 g
Part#	LI-VB1940-GM2C-119H

## LENS SPECIFICATIONS

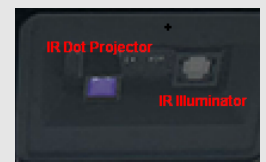
Effective focal Length	2.66 mm
Aperture, F/#	2.4
Field of View (FOV)	119° horizontal
IR Filter	Visible + 940 nm band pass filter
Relative Illumination	46.62%
Optical Distortion	-70.06% (F-tan $\theta$ )
Lens Mount	M12 x P0.5

## IR DOT PROJECTOR SPECIFICATIONS

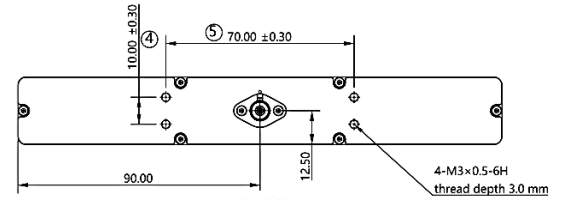
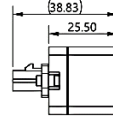
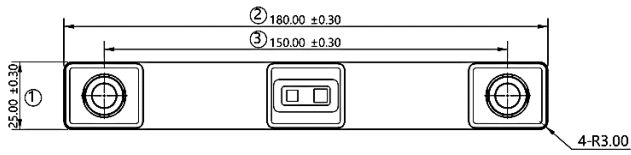
Wavelength	940 nm
Field of Illumination (FOI)	110° (H) x 77° (V)
Dot in FOV	10935

## IR ILLUMINATOR SPECIFICATIONS

Wavelength	940 nm
Field of Illumination (FOI)	110° (H) x 85° (V)



## DIMENSIONS



### NOTE:

- Other unmarked tolerances refer to the Tolerance table.
- All materials are compliant with RoHS requirements.
- ⊗ marked are important sizes.
- Unit: mm

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	X > 30	±2	120 < X ≤ 400	±10'
120 < X ≤ 400	±0.5			X > 400	±5'
400 < X ≤ 1000	±0.8				
X > 1000	±1.2				

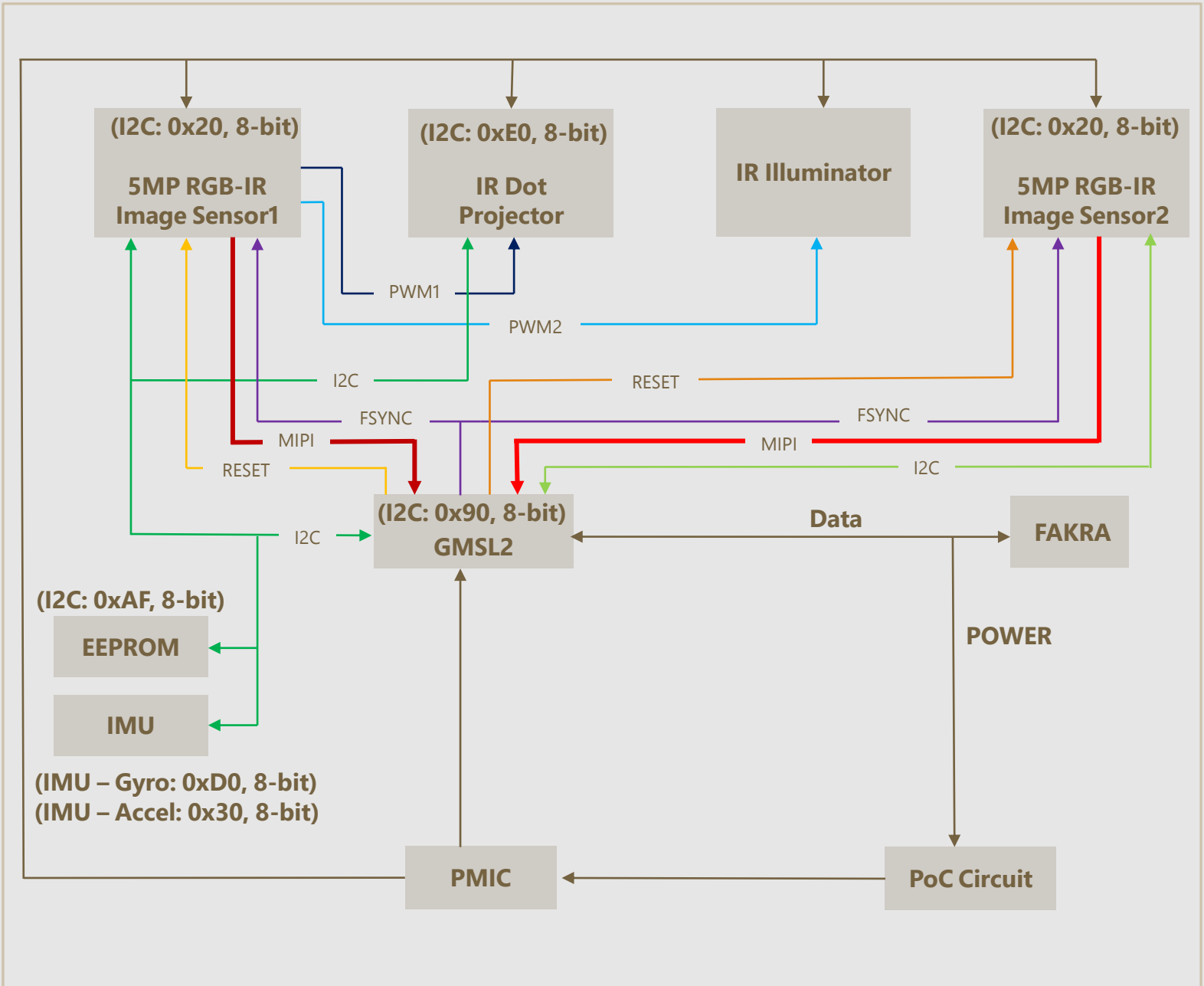
## APPLICATIONS

- Robotic Vision
- Autonomous Driving
- Driver Monitoring System
- Occupant Monitoring System
- Smart Agriculture

## WORKING MODE

- RGB + Depth
- IR + Depth
- RGB IR + Depth

## SYSTEM BLOCK DIAGRAM



## IMAGE ORIENTATION



## ● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft	17 May 2024

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