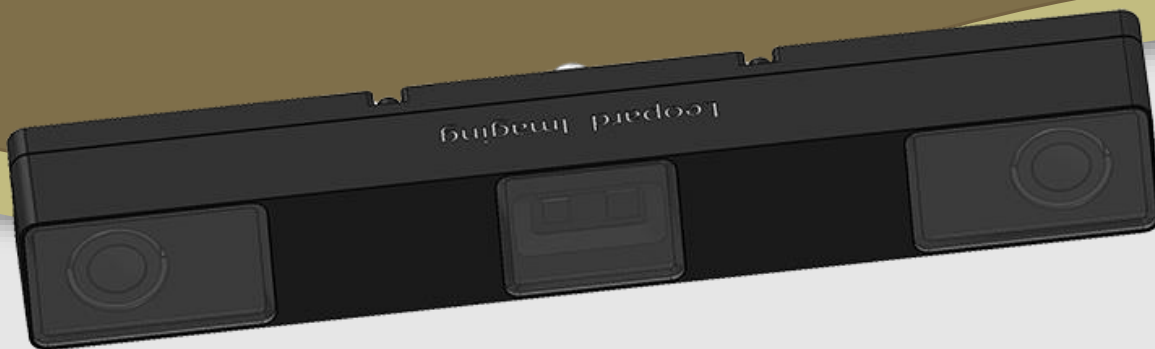




LEOPARD
IMAGING

LI-VB1940-GM2C-137H



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INTRODUCTION

The LI-VB1940-GM2C-137H 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 μm x 2.25 μm
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-137H

LENS SPECIFICATIONS

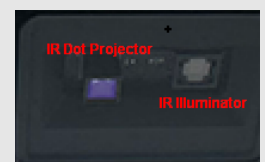
Effective focal Length	2.66 mm
Aperture, F/#	2.4
Field of View (FOV)	119° horizontal
IR Filter	Visible + 940 nm band pass filter
Relative Illumination	46.62%
Optical Distortion	-70.06% (F-tan θ)
Lens Mount	M12 x P0.5

IR DOT PROJECTOR SPECIFICATIONS

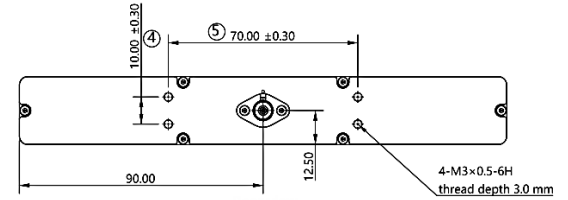
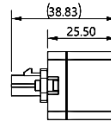
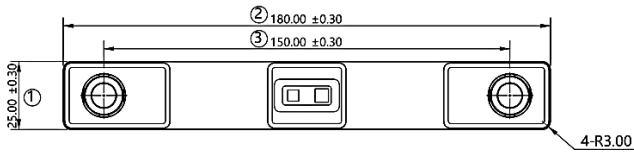
Wavelength	940 nm
Field of Illumination (FOI)	110° (H) x 77° (V)
Dot in FOV	10935

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
$0.5 < X \leq 3$	± 0.1	$0.5 < X \leq 3$	± 0.2	$X \leq 10$	$\pm 1^\circ$
$3 < X \leq 6$	± 0.1	$3 < X \leq 6$	± 0.5	$10 < X \leq 50$	$\pm 30'$
$6 < X \leq 30$	± 0.2	$6 < X \leq 30$	± 1	$50 < X \leq 120$	$\pm 20'$
$30 < X \leq 120$	± 0.3	$X > 30$	± 2	$120 < X \leq 400$	$\pm 10'$
$120 < X \leq 400$	± 0.5			$X > 400$	$\pm 5'$
$400 < X \leq 1000$	± 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

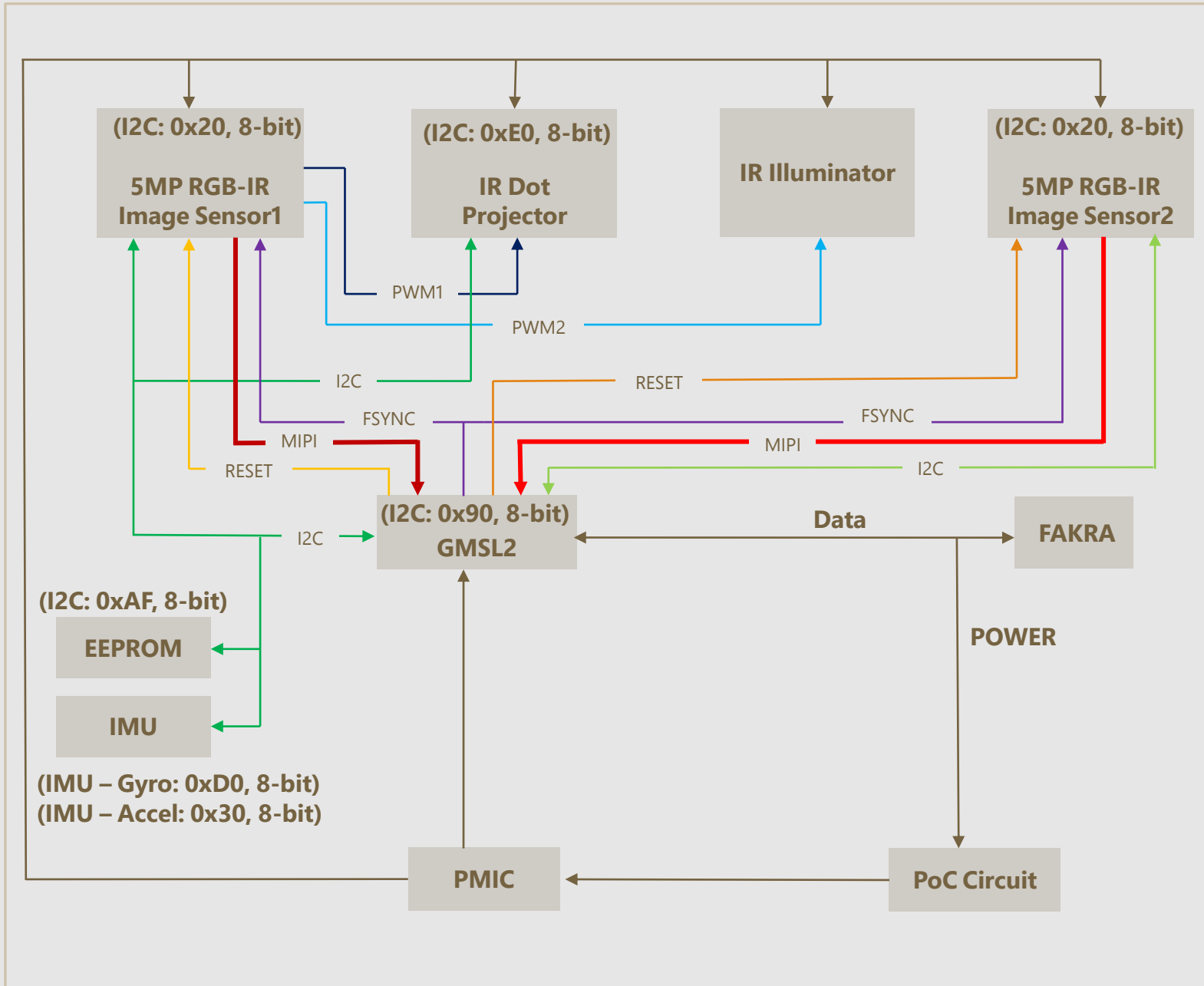


IMAGE ORIENTATION



● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft	17 May 2024
0.2	1. Updated datasheet P/N from 'LI-VB1940-GM2C-119H' to 'LI-VB1940-GM2C-137H'. 2. Updated the picture on the first page. 3. Updated DIMENSIONS	06 Jun 2024

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