



LEOPARD
IMAGING

LI-VB1940-VCL-OMS-VS775S-143H



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INTRODUCTION

The LI-VB1940-VCL-OMS-VS775S-143H is equipped with STMicroelectronics automotive 5.1 megapixel, 2.25 μm global shutter image sensor VB1940, Microchip serializer VS775S and 2 VCSELs. This camera outputs RAW RGB-IR data.

SPECIFICATIONS

Maximum Frame Rate	60 fps @ full resolution
Output Format	RAW RGB-IR, 12-bit / 10-bit / 8-bit
Sensor	STMicroelectronics 5.1 MP Global Shutter Image Sensor VB1940
Optical Format	1/2.5"
Resolution	2560 (H) x 1984 (V)
Pixel Size	2.25 x 2.25 μm
Color / Mono	RGB-IR
Shutter	Global shutter
Serializer	Microchip VS775S
ISP	Not included
VCSEL	Included
FAKRA Connector	FAKRA Z TYPE
Power Supply Range	9 ~ 19 VDC
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
IP Rating	TBD
Weight	~ 248 g

APPLICATIONS

- Autonomous Driving
- Driver Monitoring System
- Occupant Monitoring System
- In-Cabin Monitoring System

LENS SPECIFICATIONS

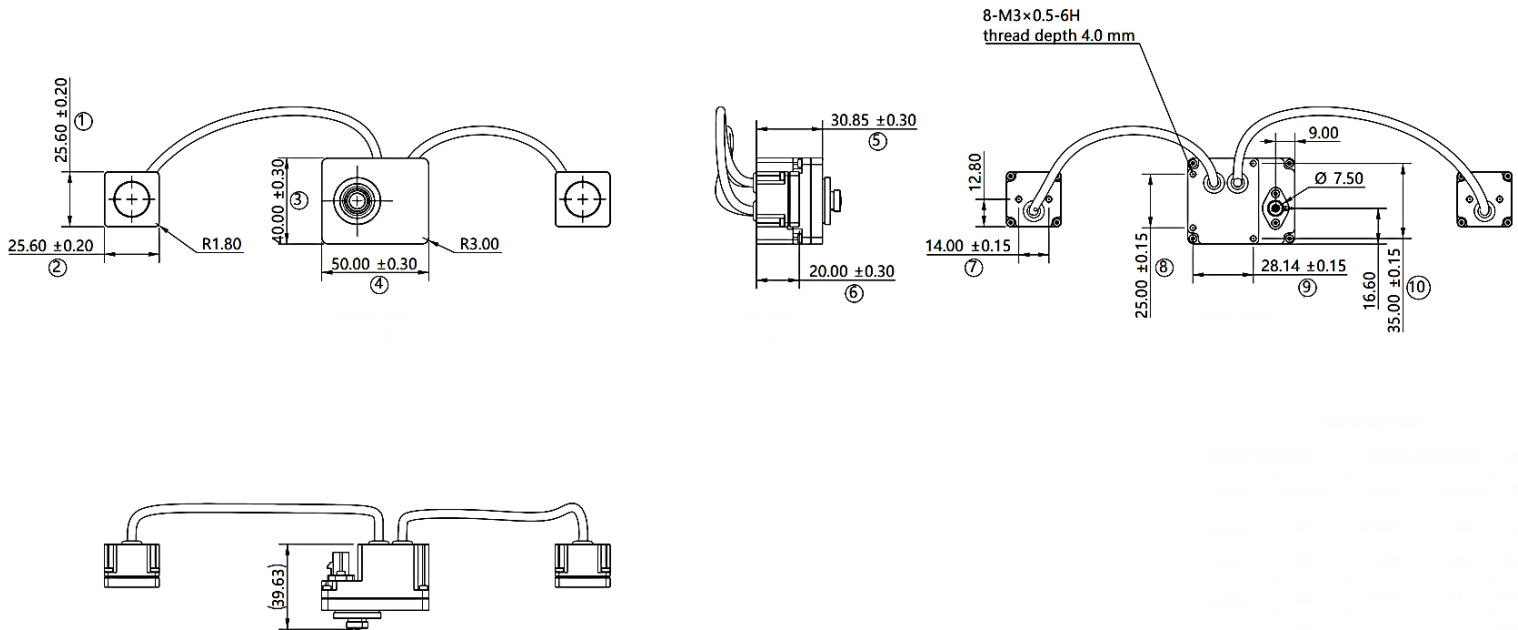
Focal Length	2.42 $\pm$ 5% mm
Aperture, F/#	2.2 $\pm$ 5%
Field of View (FOV)	143° horizontal
IR Filter	940 nm dual bandpass filter
Lens Mount	M12 x P0.5

VCSEL SPECIFICATIONS

Wavelength	940 nm
Field of Illumination (FOI)	125.5° horizontal
	111.5° vertical
QTY on Camera	2



DIMENSIONS



NOTE:

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

SYSTEM BLOCK DIAGRAM

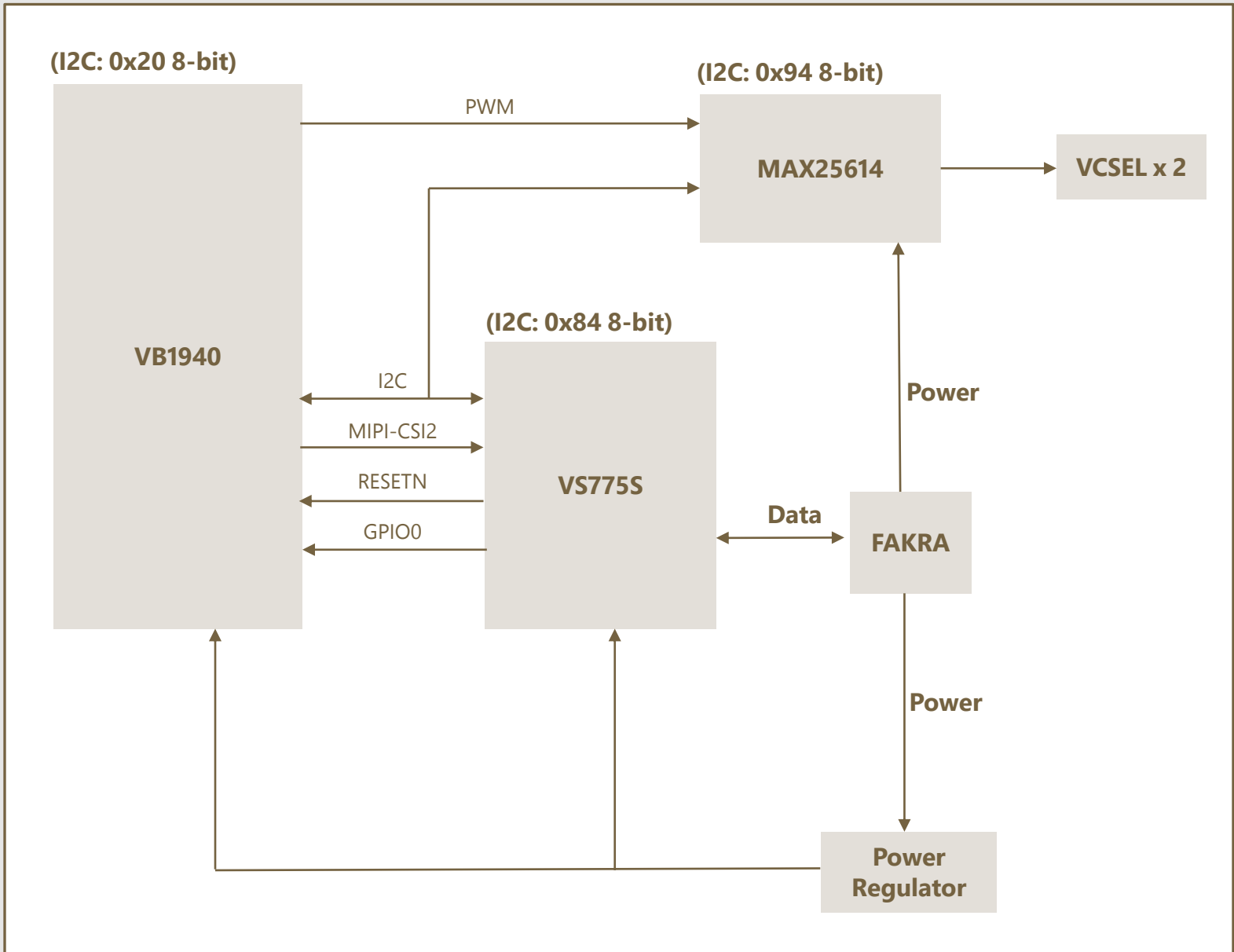


IMAGE ORIENTATION



- REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	06 Aug 2026

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