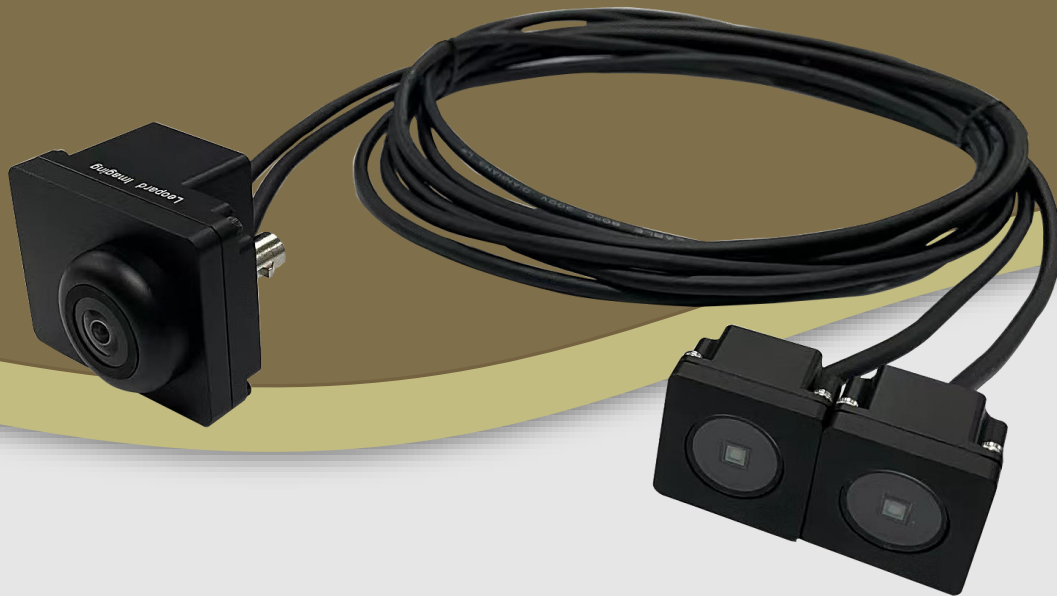




LEOPARD
IMAGING

LI-VB1940-VCL-OMS-FP3-137H



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INTRODUCTION

The LI-VB1940-VCL-OMS-FP3-137H is equipped with STMicroelectronics automotive 5.1 megapixel, 2.25 μm global shutter image sensor VB1940, FPD-Link III serializer TI953 and 2 VCSELs. This camera outputs RAW RGB-IR data.

SPECIFICATIONS

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
Output Format	RAW RGB-IR, 12-bit / 10-bit / 8-bit
Color / Mono	RGB-IR
Maximum Frame Rate	60 fps @ full resolution
Shutter	Global shutter
Serializer	TI953 FPD-Link III (DS90UB953-Q1)
Power Supply Range	9 ~ 19 VDC
ISP	Not included
IP Rating	TBD
VCSEL	Included
FAKRA Connector	FAKRA Z TYPE
Power Consumption (2 VCSELs on)	375 mA @ 12 VDC (2560 x 1984 @ 25 fps)
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 248 g
Part#	LI-VB1940-VCL-OMS-FP3-137H

APPLICATIONS

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

LENS SPECIFICATIONS

Focal Length	2.666 mm
Aperture, F/#	2.4
Field of View (FOV)	137° horizontal
IR Filter	Visible + 940 nm band pass filter
Relative Illumination	43.99%
Optical Distortion	-87.08% (F-tan θ)
Lens Mount	M12 x P0.5

EYE SAFETY

- Comply with IEC 60825 - 1:2014 standard

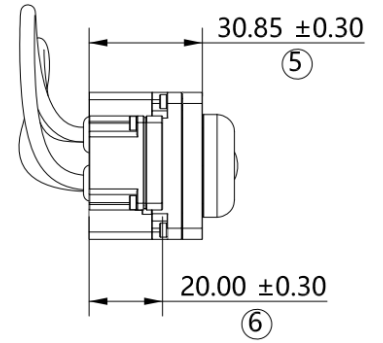
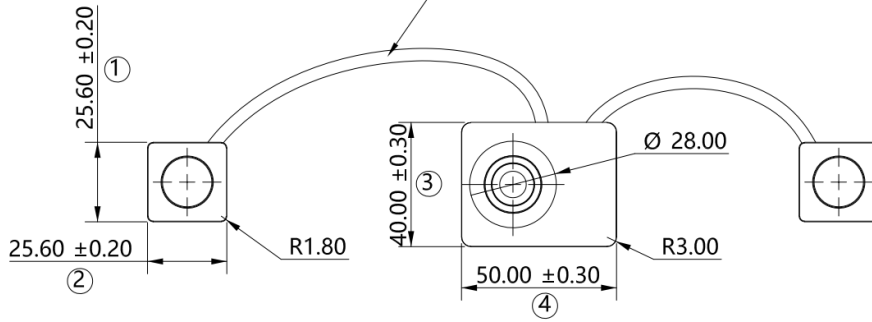
VCSEL SPECIFICATIONS

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

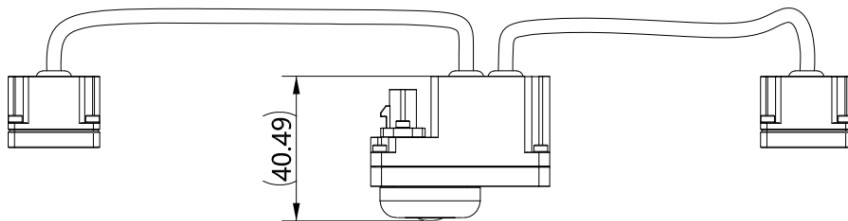
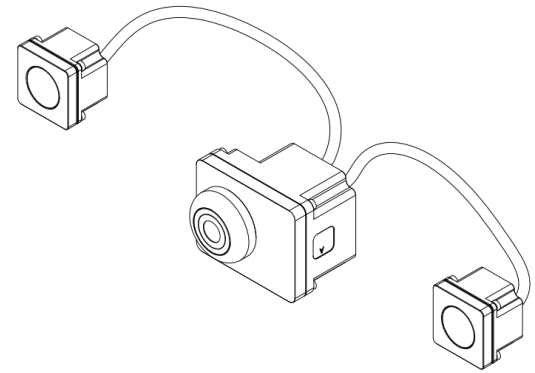
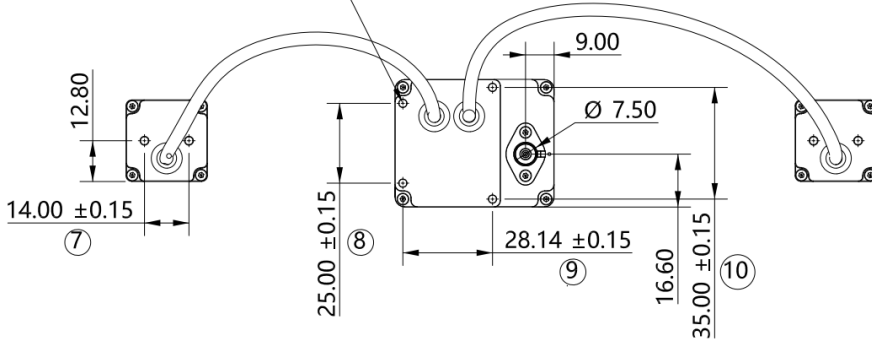


DIMENSIONS

Cable length: 2m



8-M3×0.5-6H
thread depth 4.00 mm



NOTE:

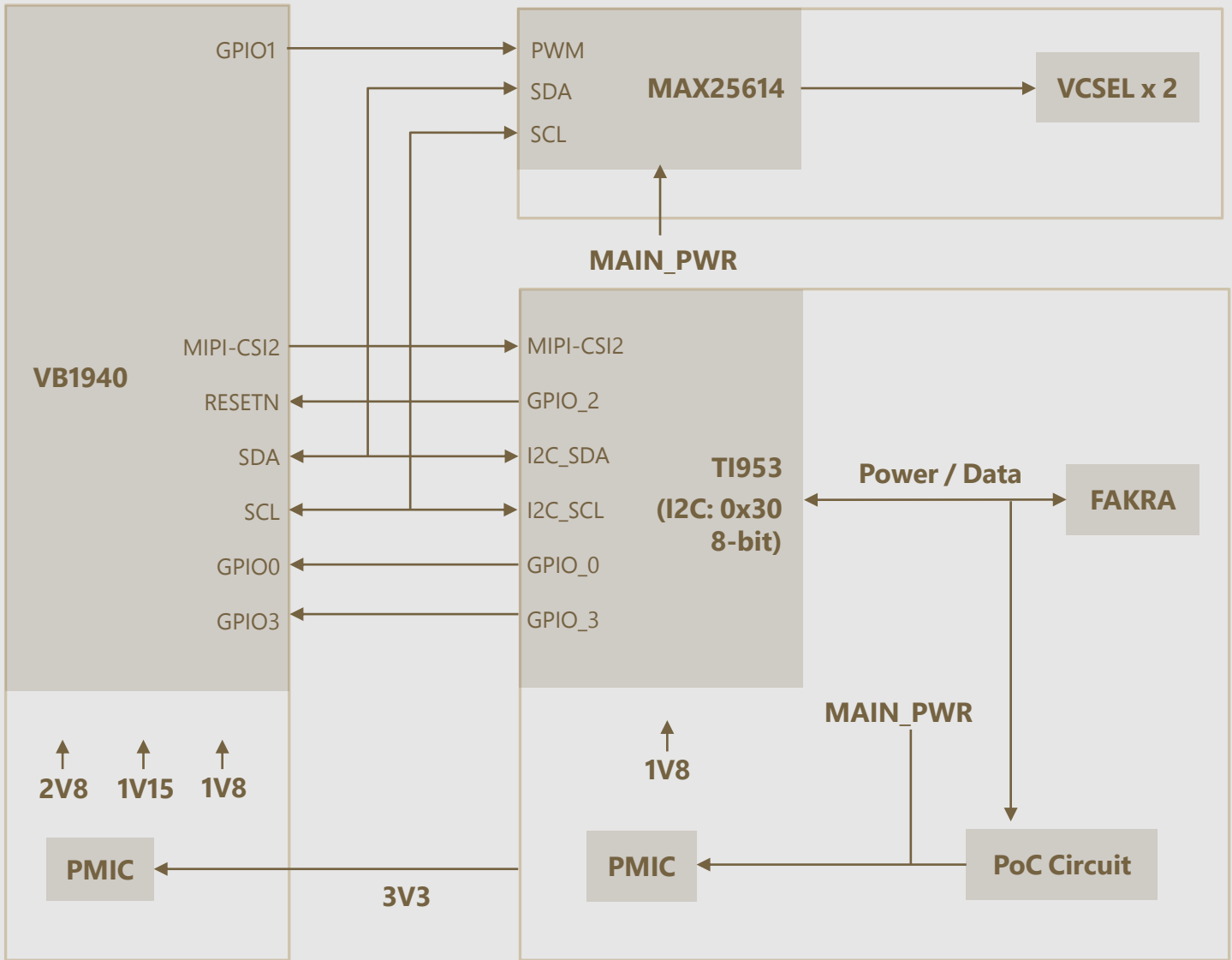
- Other unmarked tolerances are ± 0.3 mm.
- ⊗ marked are important sizes.

Unit: mm

PINOUT CONNECTIONS

(I2C: 0x20 8-bit)

(I2C: 0x94 8-bit)



USB3.0 CAMERA KIT

LI-FPDLINKIII-USB



Top View



Bottom View

LI-VB1940-VCL-OMS-FP3-137H can connect to LI-FPDLINKIII-USB as a USB 3.0 camera.

Part#: **LI-USB30-VB1940-VCL-OMS-FP3-137H**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Global shutter
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 315 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 2560 x 1984 @ 25 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-VB1940-VCL-OMS-FP3-137H	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
0.1	Initial draft.	11 Jul 2023

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