



LEOPARD
IMAGING

LI-VB56G6A-DMS-GM2B-050D



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INTRODUCTION

The LI-VB56G6A-DMS-GM2B-050D is equipped with ADI MAX96717F, IR LED and STMicroelectronics 1.5MP global shutter image mono sensor VB56G6A which leverages outstanding 3D stacking and BSI (backside illumination) processes, it performs outstandingly in the visible and the near infrared region (940 nm), making it suitable for DMS application. This camera outputs RAW data.

SPECIFICATIONS

Maximum Frame Rate	82 fps @ full resolution
Output Format	10-bit / 8-bit RAW
Sensor	STMicroelectronics 1.5MP image sensor VB56G6A
Optical Format	1/4"
Pixel Size	2.61 x 2.61 μm
Color / Mono	Mono
Shutter	Global shutter
Resolution	1124 (H) x 1364 (V) (active pixels)
Serializer	ADI MAX96717F
Power Supply Range	9 ~ 19 VDC
ISP	Not included
IR LED	Included
FAKRA Connector	FAKRA Z TYPE
IP Rating	TBD
Power Consumption	65mA @ 12 VDC (64.5 fps @ 1124 x 1364, Positive duty cycle: TBD)
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 84 g

APPLICATIONS

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

LENS SPECIFICATIONS

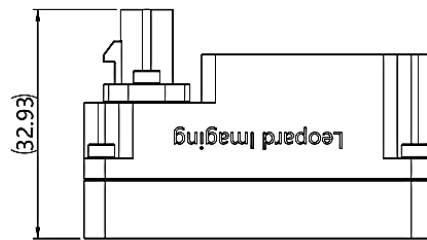
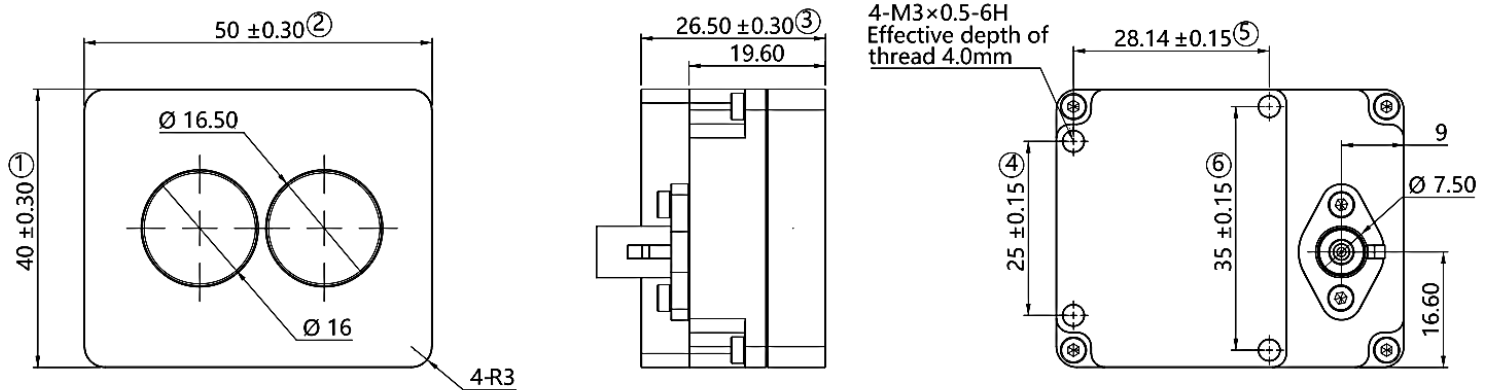
Focal Length	4.82 mm $\pm$ 5%
Aperture, F/#	2.0 $\pm$ 5%
Field of View (FOV)	50° diagonal
Optical Distortion	< -5.0% (f-tan θ)
Relative Illumination	76%
IR Filter	940 nm IR filter
Lens Mount	M8 x P0.35

EMITTER IR SPECIFICATIONS

Wavelength	940 nm
Angle	50°
Qualification	AEC-Q102
QTY on Camera	1



DIMENSIONS



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				

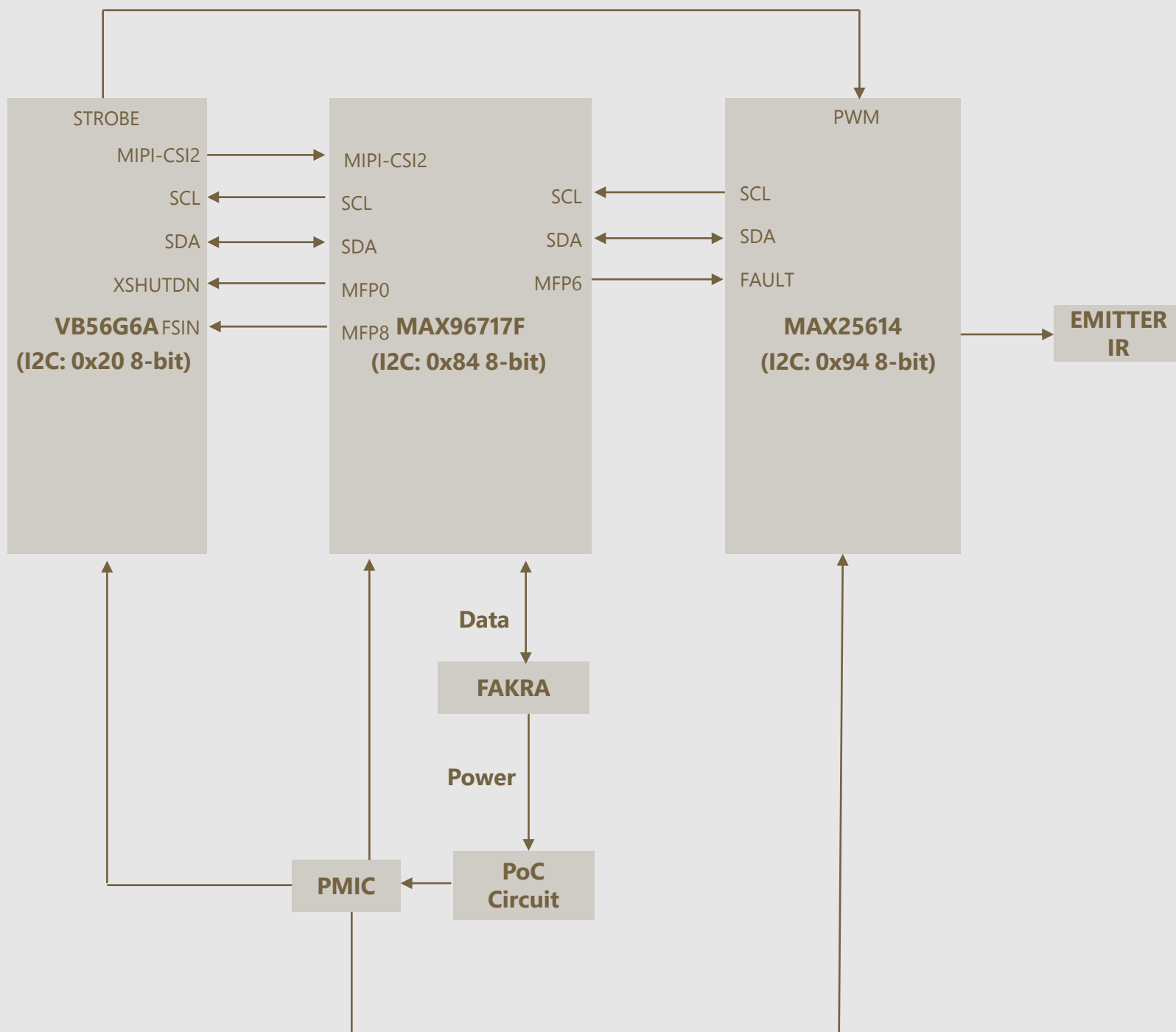
NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked refer to tolerance table.
- All materials are compliant with RoHS requirements.
- Unit: mm

DEFAULT IMAGING DIRECTION



SYSTEM BLOCK DIAGRAM



USB3.0 CAMERA KIT

LI-GMSL2-USB



Top View



Bottom View

LI-VB56G6A-DMS-GM2B-050D can connect to LI-GMSL2-USB as a USB 3.0 camera.

Part#: **LI-USB30-VB56G6A-DMS-GM2B-050D**

SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Global shutter
- Allows customization
- 12 VDC power supply for camera
- Weight: ~ 146 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 64.5 fps @ 1120 x 1364
- Compatible with Windows, Linux OS and other OS which have UVC drivers



BOM

#	Items	QTY
1	LI-VB56G6A-DMS-GM2B-050D	1
2	LI-GMSL2-USB	1
3	3-Meter Fakra Cable	1
4	12 VDC Power Supply for Camera	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.	12 Nov 2025

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