



LI-ST-VB56G4A-DMS-GMSL2



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INTRODUCTION

The LI-ST-VB56G4A-DMS-GMSL2 is equipped with STMicroelectronics 1.5MP global shutter image sensor VB56G4A which leverages outstanding 3D stacking and BSI (backside illumination) processes to optimize performance for near infrared scenes. This camera outputs 10-bit RAW data.

SPECIFICATIONS

Sensor	STMicroelectronics 1.5MP Global Shutter Image Sensor VB56G4A
Optical Format	1/4"
Resolution	1124 (H) x 1364 (V)
Pixel Size	2.61 x 2.61 μm (BSI pixel)
Output Format	10-bit RAW data
Color / Mono	Monochrome
Shutter	Global shutter
Maximum Frame Rate	90 fps @ full resolution
Dynamic Range (Linear Mode)	60 dB
Serializer	Maxim MAX9295A/B
Power Supply Range	9 ~ 19 VDC
FPGA	Included for VCSEL control
ISP	Not included
VCSEL	Included
FAKRA Connector	FAKRA E TYPE
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	TBD
Part#	LI-ST-VB56G4A-DMS-GMSL2

APPLICATIONS

- Face Recognition
- Driver Monitoring
- Autonomous Driving
- NIR Application

LENS SPECIFICATIONS

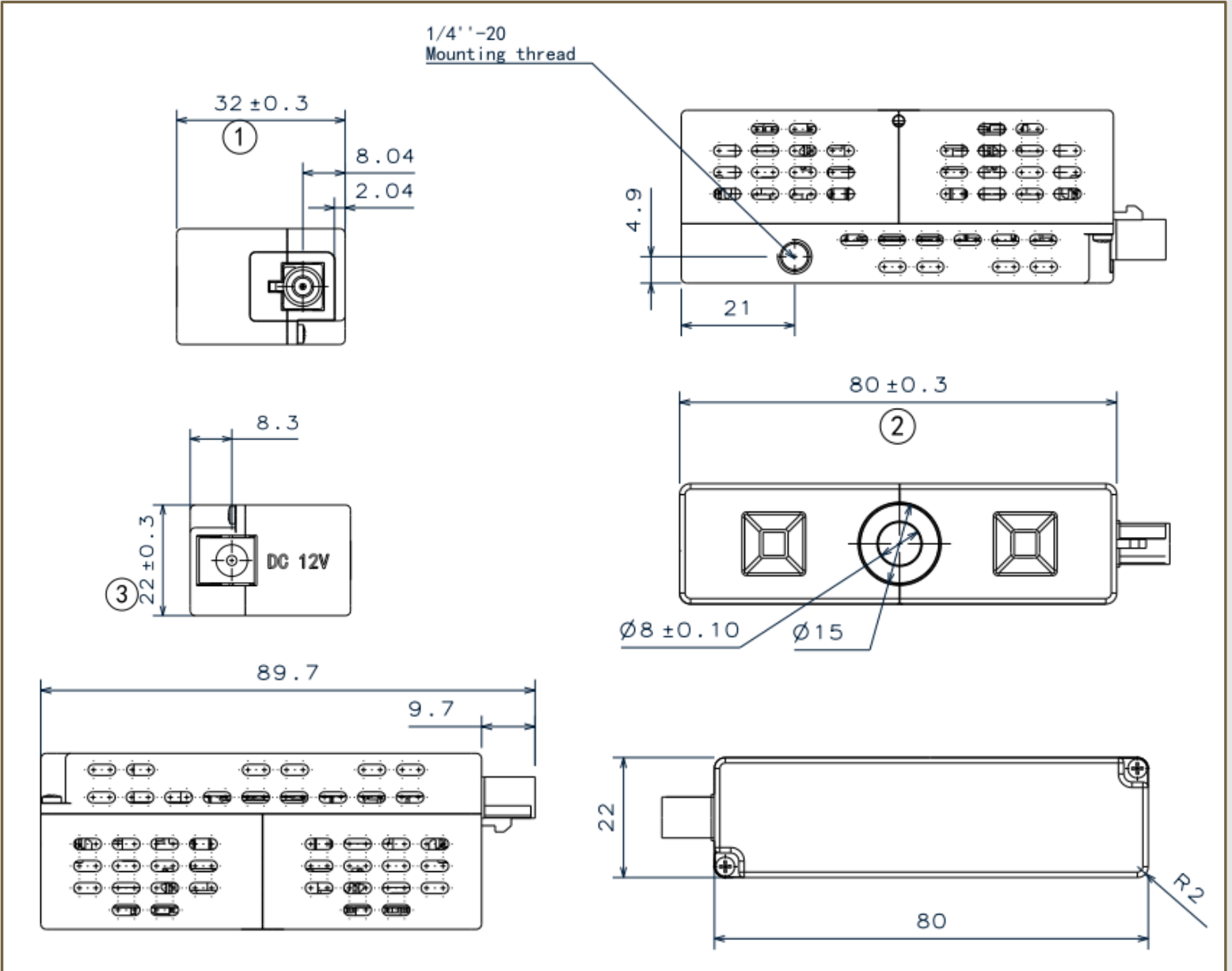
Model	HJ6103K
Effective Focal Length	4.579 mm \pm 5%
Focusing Range	50 ~ 100 cm
Aperture, F/#	2.0 \pm 5%
Field of View (FOV)	54.88° \pm 3° diagonal
	43.32° \pm 2° horizontal
	36.06° \pm 2° vertical
Optical Distortion	-2.86% \pm 5% F-Tan (θ)
Relative Illumination	\geq 50.0°
IR Filter	940 nm IR filter
Lens Mount	M8 x P0.35

VCSEL SPECIFICATIONS

Wavelength	940 nm
Filed of Illumination (FOI)	60° horizontal
	45° vertical
QTY on Camera	2



DIMENSIONS



NOTE:

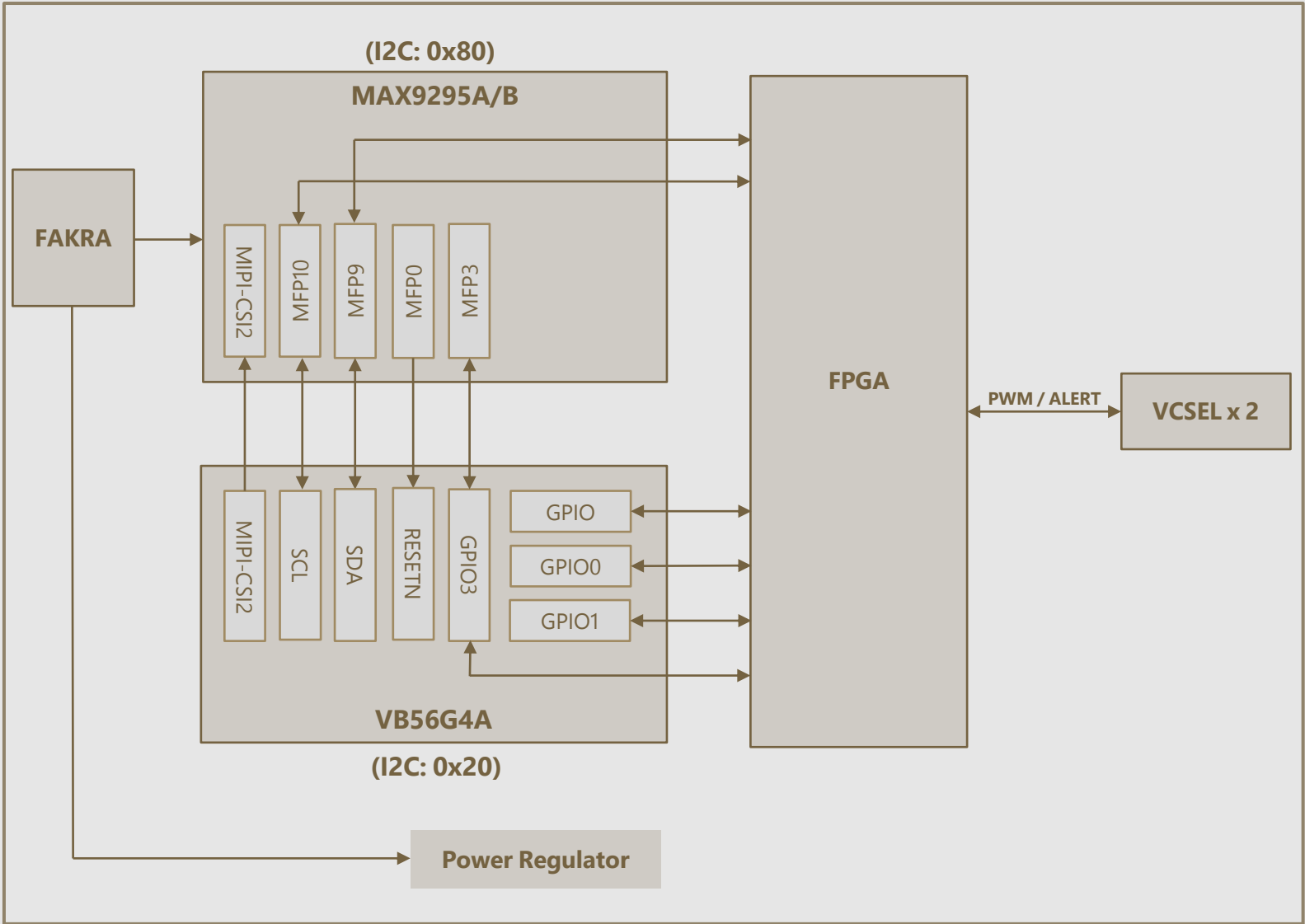
- ⊗ marked are important sizes.
- Tolerances for others unmarked are ± 0.3 mm.

Unit: mm

EYE-SAFETY

- Caution: when in use, do not stare at the device or view directly without eye protection.

PINOUT CONNECTIONS



USB3.0 CAMERA KIT

LI-GMSL2-USB-BOX



Front View



Side View

LI-ST-VB56G4A-DMS-GMSL2 can connect to LI-GMSL2-USB-BOX as a USB 3.0 camera.

Part#: **LI-USB30-ST-VB56G4A-DMS-GMSL2**

SPECIFICATIONS

- USB 3.0 Super Speed support
- RAW output
- Global shutter
- UVC compliant
- Allows customization
- 12 VDC power supply for camera
- Weight: TBD
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 1124 x 1364 @ 60 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers

BOM

#	Items	QTY
1	LI-ST-VB56G4A-DMS-GMSL2	1
2	LI-GMSL2-USB-BOX	1
3	3-Meter Fakra Cable	1
4	LI-PS12-02	1
5	USB3.0 Cable	1



SDK SUPPORTED

- Camera Tool Source Code in C#
- Capture & Display

● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	30 Jun 2022
0.2	Added focusing range in "LENS SPECIFICATIONS" part.	11 Nov 2022
0.3	<ol style="list-style-type: none">1. Updated power consumption to TBD.2. Replaced System and Power Block with Pinout Connections.3. Added "Eye-Safety" section.4. Deleted optical power in "VCSEL Specifications" section.5. Revised connector type from FAKRA Z TYPE to FAKRA E TYPE.	13 Oct 2023

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