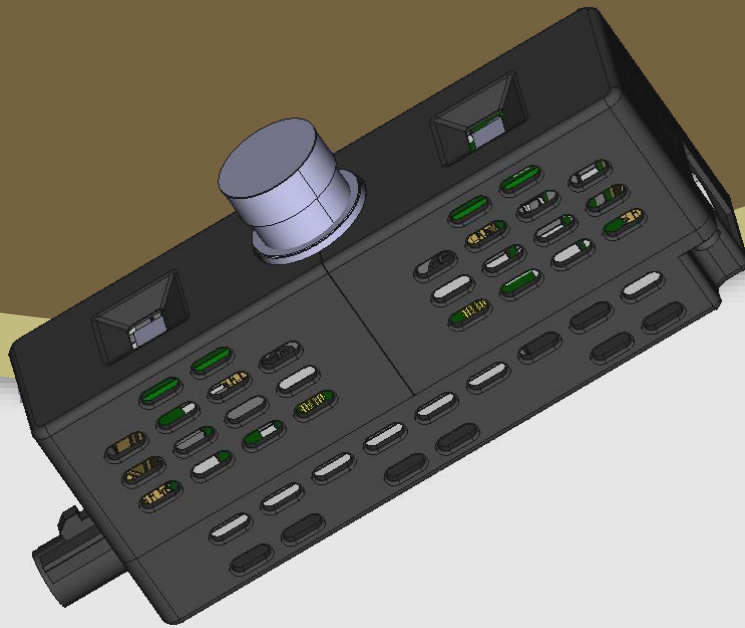# LI-ST-VG1762-RGBIR-OMS/DMS

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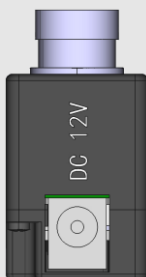
sales@leopardimaging.com

Support:

support@leopardimaging.com

INTRODUCTION

The LI-ST-VG1762-RGBIR-OMS/DMS is equipped with STMicroelectronics high-dynamic RGB-IR global shutter image sensor VG1762 which features high MTF, 940 nm IR filter, current monitoring, over current protection and over temp protection. This camera outputs 8-bit / 10-bit / 12-bit / 14-bit / 16-bit RAW data.

SPECIFICATIONS

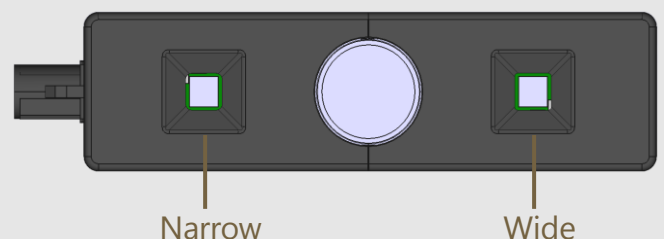|	
Sensor	STMicroelectronics HDR RGB-IR Global Shutter Image Sensor VG1762
Optical Format	1/2.5"
Resolution	1944 (H) x 1204 (V)
Pixel Size	3.2 x 3.2 µm
Output Format	8-bit / 10-bit / 12-bit / 14-bit / 16-bit RAW data
Color / Mono	RGB-IR
Shutter	Global shutter
Maximum Frame Rate	60 fps @ 1944 x 1204
Dynamic Range	96 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 (1944 x 1204 @ 10.5 fps)	Approx. 260 mA @ 12 VDC (2 VCSELs off) Approx. 380 mA @ 12 VDC (2 VCSELs on)
Operating Temp	-25℃ ~ +85℃
Storage Temp	-25℃ ~ +85℃
Weight	TBD
Part#	LI-ST-VG1762-RGBIR-OMS/DMS

APPLICATIONS

- Cabin Monitoring
- Driver Monitoring
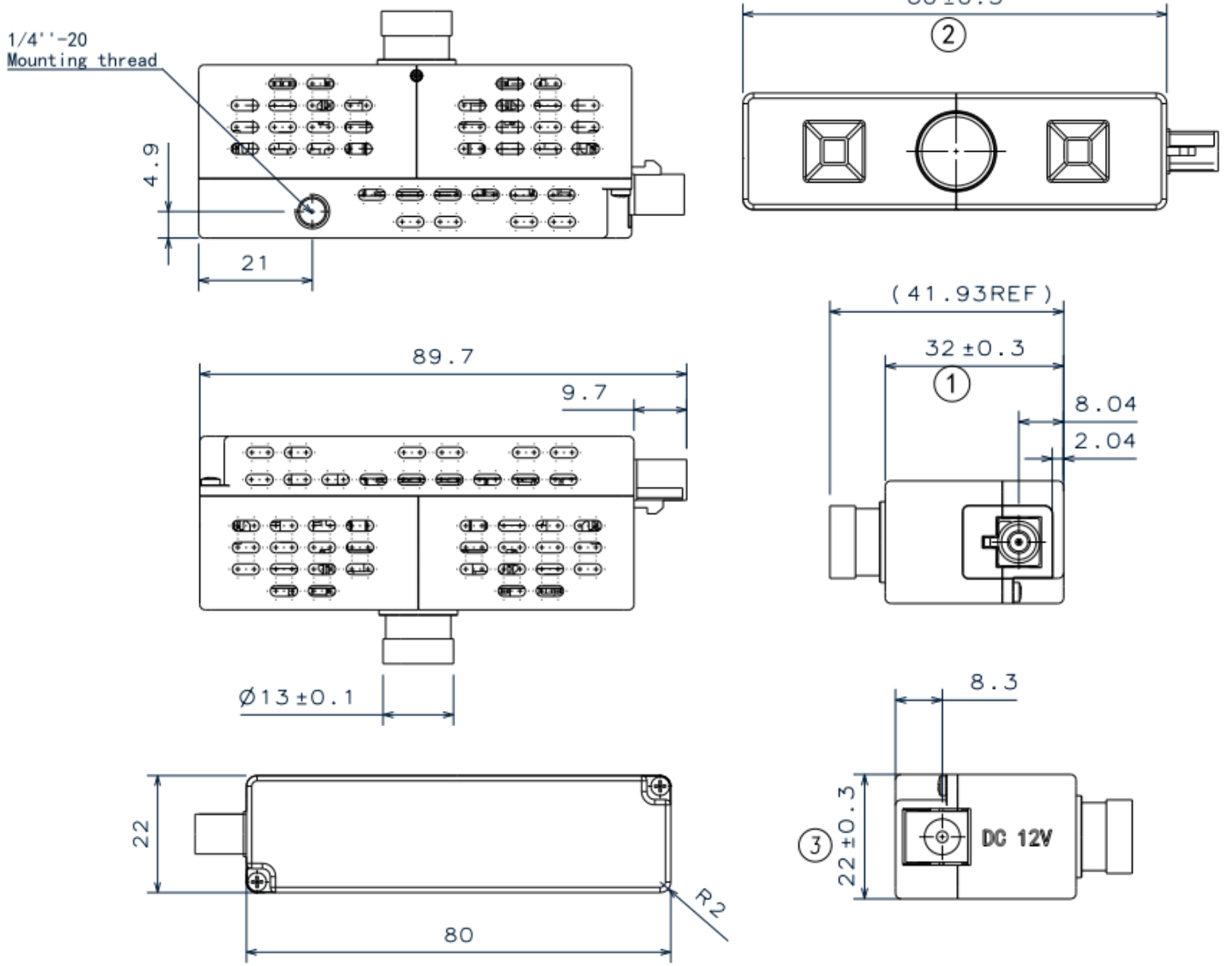- Autonomous Driving
- IR Application

LENS SPECIFICATIONS

Effective Focal Length	3.723 mm
Aperture, F/#	1.7
Field of View (FOV)	122.06° diagonal
	100.94° horizontal
	60.42° vertical
Optical Distortion	-45.46%
Relative Illumination	61.67%
IR Filter	Visible + 940 nm
Lens Mount	M12 x P0.5

VCSEL SPECIFICATIONS

Wavelength	940 nm
Field of Illumination (FOI): Wide	110° horizontal
	85° vertical
Field of Illumination (FOI): Narrow	60° horizontal
	45° vertical
QTY on Camera	2

Narrow   Wide

DIMENSIONS

1/4''-20
Mounting thread

4.9

21

80 ±0.3
②

89.7

9.7

∅13 ±0.1

(41.93REF)

32 ±0.3
①

8.04

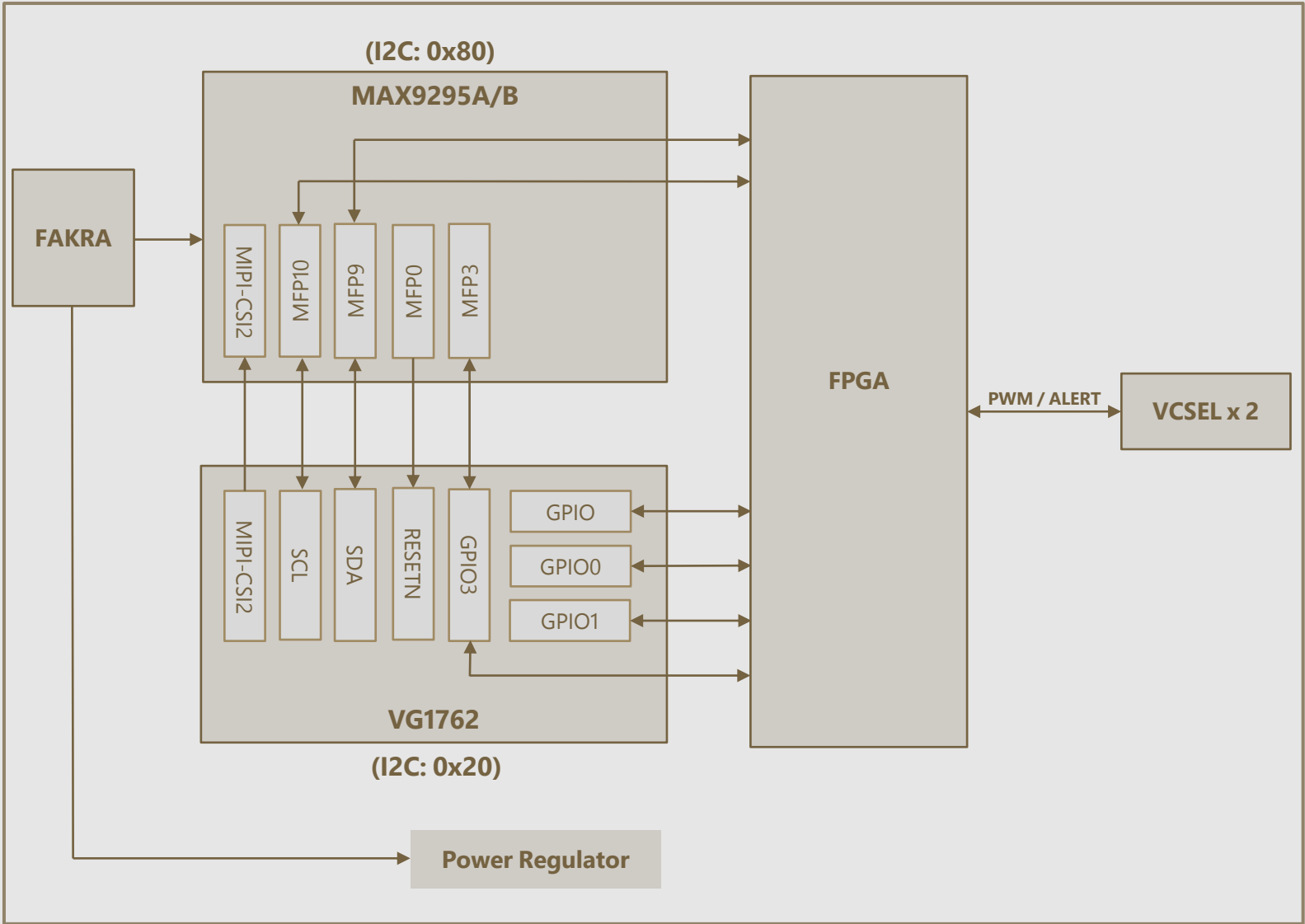2.04

8.3

22

③ 22 ±0.3

DC 12V

80

R2

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

(I2C: 0x80)

MAX9295A/B

FAKRA

MIPI-CSI2

MFP10

MFP9

MFP0

MFP3

MIPI-CSI2

SCL

SDA

RESETN

GPIO3

GPIO

GPIO0

GPIO1

VG1762

(I2C: 0x20)

FPGA

PWM / ALERT

VCSEL x 2

Power Regulator

USB3.0 CAMERA KIT

LI-GMSL2-USB-BOX

Front View

Side View

LI-ST-VG1762-RGBIR-OMS/DMS can connect to LI-GMSL2-USB-BOX as a USB 3.0 camera.

Part#: **LI-USB30-ST-VG1762-RGBIR-OMS/DMS**

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: 1944 x 1204 @ 10.5 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers

BOM

#	Items	QTY
1	LI-ST-VG1762-RGBIR-OMS/DMS	1
2	LI-GMSL2-USB-BOX	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

REVISION HISTORY

Revision	Description	Release Date
1.0	Initial draft.	27 Sep 2021
1.1	1. Changed Part# from LI-VG1761-GMSL2-DMS to LI-ST-VG1761-RGBIR-OMS/DMS. 2. Updated introduction and VCSEL power description. 3. Added Rev No. (Rev B.)	01 Dec 2021
1.2	Changed VG1761 to VG1762.	31 Dec 2021
1.3	1. Updated power consumption. 2. Replaced System and Power Block with Pinout Connections. 3. Changed Power Supply QTY from 2 to 1 in the BOM. 4. Added "Eye-Safety" section. 5. Deleted optical power in "VCSEL Specifications" section. 6. Updated I2C address of 9295.	08 Oct 2023

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