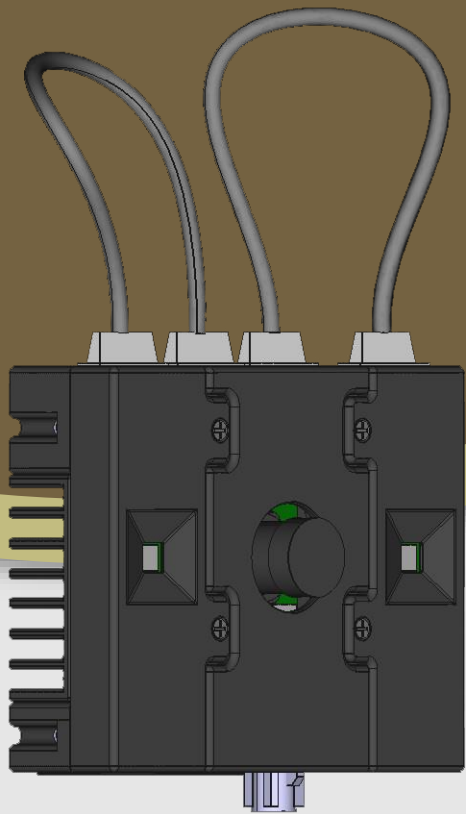# LI-ST-VG1762-RGBIR-OMS/DMS-T

Address:

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INTRODUCTION

The LI-ST-VG1762-RGBIR-OMS/DMS-T is equipped with STMicroelectronics high-dynamic RGB-IR global shutter image sensor VG1762 which features high MTF. This camera outputs 8-bit / 10-bit / 12-bit / 14-bit / 16-bit RAW data.

SPECIFICATIONS

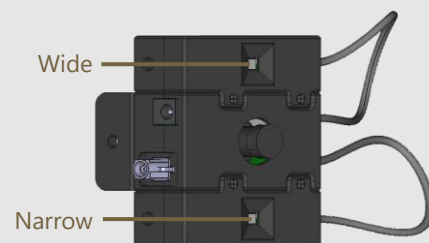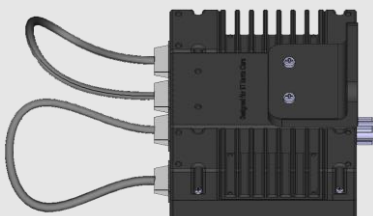|	
Sensor	STMicroelectronics HDR RGB-IR Global Shutter Image Sensor VG1762
Optical Format	1/2.5"
Maximum Resolution	1944 (H) x 1204 (V)
Pixel Size	3.2 x 3.2 μm
Output Format	8-bit / 10-bit / 12-bit / 14-bit / 16-bit RAW data
Color / Mono	RGB-IR
Shutter	Global shutter
Frame Rate	60 fps @ 1944 x 1204
Dynamic Range	96 dB
Serializer	Maxim MAX9295A/B
Power Supply Range	9 ~ 19 VDC
FPGA	Included for VCSEL and sensor control
ISP	Not included
VCSEL	Included
FAKRA Connector	FAKRA Z TYPE
Power Consumption	≤ 113 mA @ 12 VDC (Camera module + 2 LEDs)
Operating Temp	-25℃ ~ +85℃
Storage Temp	-25℃ ~ +85℃
Weight	TBD
Rev No.	Rev A
Part#	LI-ST-VG1762-RGBIR-OMS/DMS-T

APPLICATIONS

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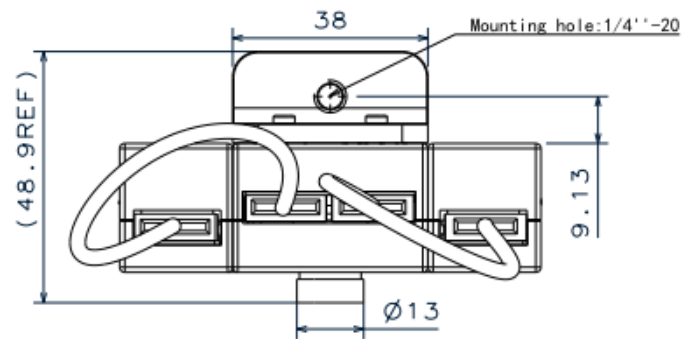- IR Application

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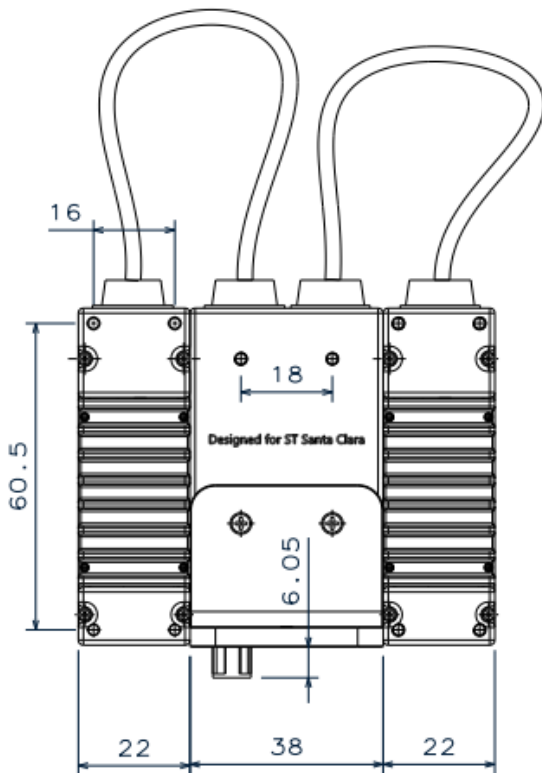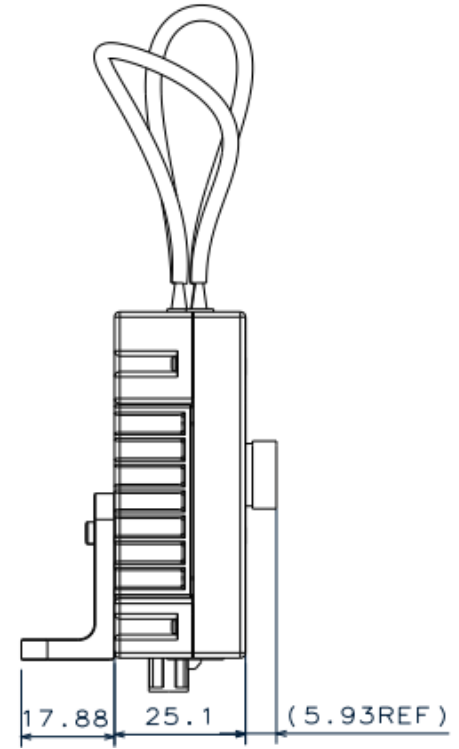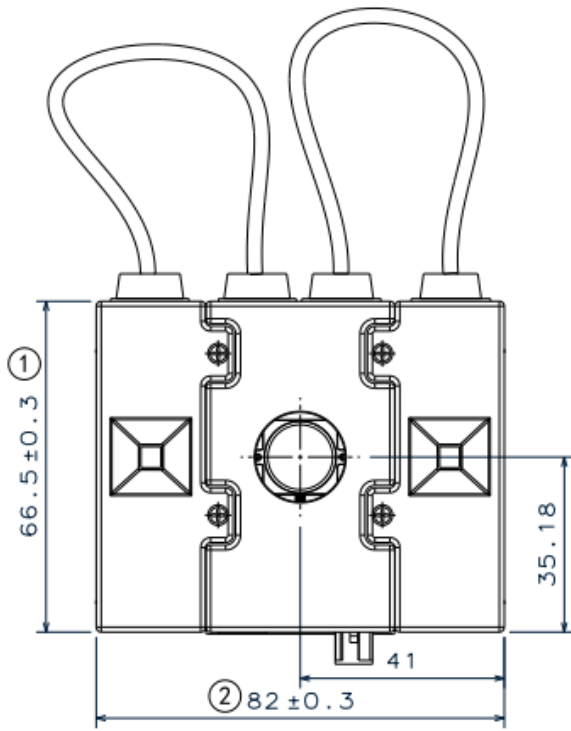
Focal Length	3.723 mm
Aperture, F/#	1.7
Field of View (FOV)	122.06° diagonal
	100.94° horizontal
	60.42° vertical
Optical Distortion	-45.46%
Relative Illumination	61.67%
IR Filter	Visible + 940 nm
Lens Mount	M12 x P0.5

VCSEL SPECIFICATIONS

Wavelength	940 nm
Field of Illumination (FOI): Wide	110° horizontal
	85° vertical
Field of Illumination (FOI): Narrow	60° horizontal
	45° vertical
Maximum Optical Power	6 W
QTY on Camera	2

Wide

Narrow

DIMENSIONS

① 66.5±0.3

35.18

41

② 82±0.3

17.88 | 25.1 | (5.93REF)

16

18

Designed for ST Santa Clara

60.5

6.05

22 | 38 | 22

(48.9REF)
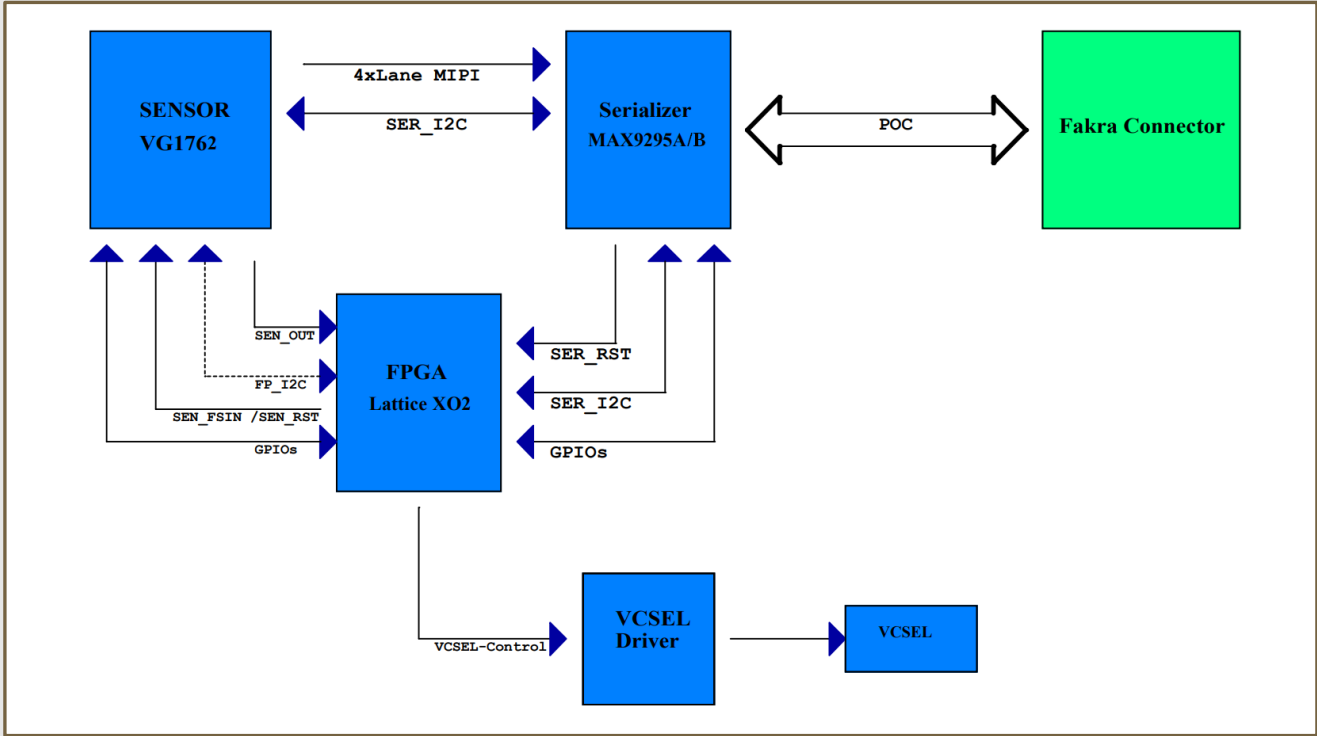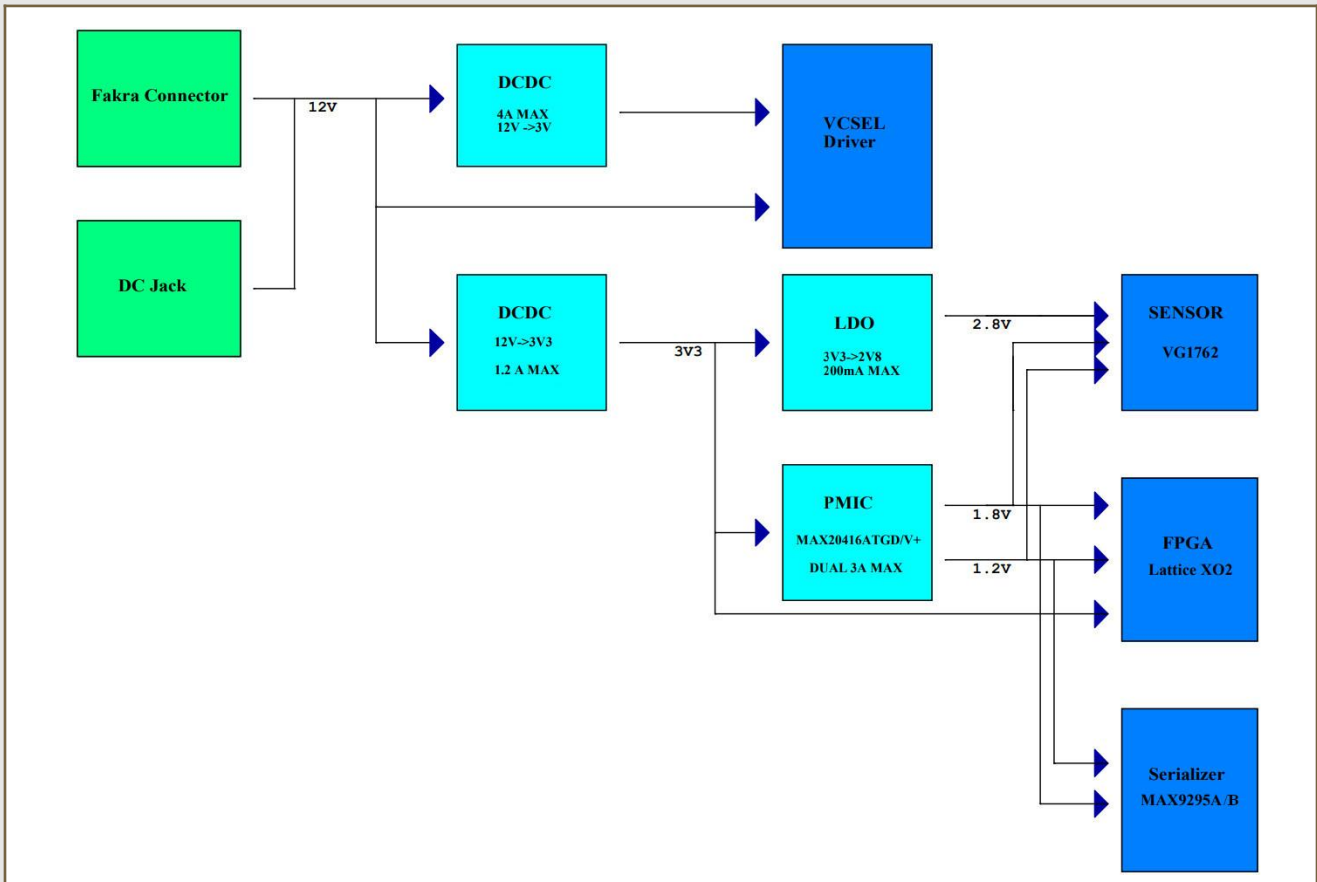
38

Mounting hole:1/4''-20

9.13

Ø13

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

Unit: mm

SYSTEM BLOCK DIAGRAM

POWER BLOCK DIAGRAM

USB3.0 CAMERA KIT

LI-GMSL2-USB-BOX

Front View

Side View

LI-ST-VG1762-RGBIR-OMS/DMS-T can connect to LI-GMSL2-USB-BOX as a USB 3.0 camera.
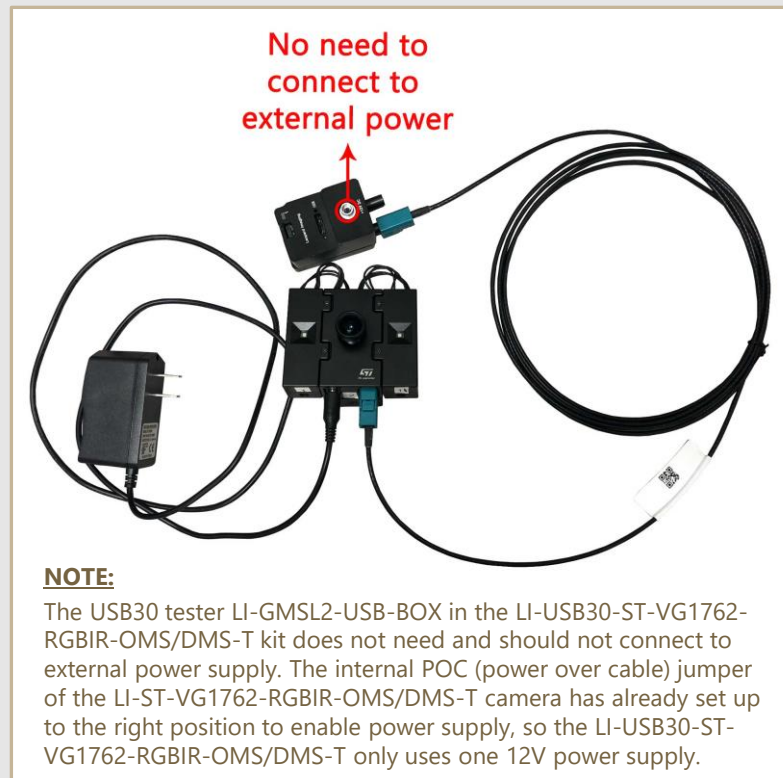
Part#: **LI-USB30-ST-VG1762-RGBIR-OMS/DMS-T**

SPECIFICATIONS

- USB 3.0 Super Speed support
- RAW output
- 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 @ 60 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers

No need to connect to external power

NOTE:
The USB30 tester LI-GMSL2-USB-BOX in the LI-USB30-ST-VG1762-RGBIR-OMS/DMS-T kit does not need and should not connect to external power supply. The internal POC (power over cable) jumper of the LI-ST-VG1762-RGBIR-OMS/DMS-T camera has already set up to the right position to enable power supply, so the LI-USB30-ST-VG1762-RGBIR-OMS/DMS-T only uses one 12V power supply.

BOM

#	Items	QTY
1	LI-ST-VG1762-RGBIR-OMS/DMS-T	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	First release.	13 Aug 2021
1.1	Changed Part# from LI-VG1761-GMSL2-DMS to LI-ST-VG1761-RGBIR-OMS/DMS-100H and added Rev No. (Rev A.)	16 Nov 2021
1.2	Changed Part# from LI-ST-VG1761-RGBIR-OMS/DMS-100H to LI-ST-VG1761-RGBIR-OMS/DMS-T.	26 Nov 2021
1.3	Changed VG1761 to VG1762 and the number of power supply from 2 to 1.	12 Jan 2022
1.4	Updated power consumption, frame rate and resolution.	31 Aug 2022
1.5	Added note about power on the picture of USB30 kit and deleted Part# in power block diagram.	15 Nov 2022