



**LEOPARD**  
IMAGING

# LI-XAVIER-KIT-OWL-Q



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## KEY FEATURES

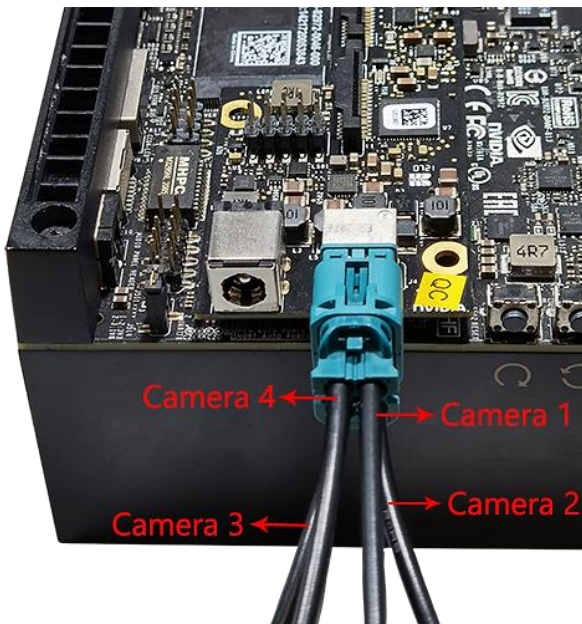
- Compatible with Nvidia® Jetson AGX Xavier™ Developer Kit
- Adapter board: E3653-A03
- Sensor: ON Semiconductor CMOS image sensor AR0234CS
- Active pixels: 1920 (H) x 1200 (V)
- Color camera
- Weight: ~ 178 g (E3653-A03 adapt + 4 OWL cameras)
- Connector: FAKRA connector FAKRA Z TYPE
- Allows customization
- Part#: **LI-XAVIER-KIT-OWL-Q**

## APPLICATIONS

- Bar Code Scanner
- Gesture Recognition
- 3D Scanning
- Positional Tracking
- Iris Scanning
- Augmented Reality
- Virtual Reality
- Biometrics
- Machine Vision

## LENS SPECIFICATIONS

Focal Length	1.34 ± 5%
Aperture, F/#	2.0 ± 5%
Field of View (FOV)	202.0° ± 3° horizontal
	127.2° ± 2° vertical
IR Filter	650 nm ± 10 nm IR cut filter
Lens Mount	M12 x 0.5



### NOTE:

- Camera connection order is based on the version of the driver. The order shown above is for the driver based on R35.3.1 (Jetpack 5.1.1).
- Nvidia® Jetson AGX Xavier™ Developer Kit is **NOT** included.

## BOM DETAILS

**Nvidia® Jetson AGX Xavier™ Developer Kit is NOT included.**

#	Items	Part Number	QTY
1	GMSL2 DeSer Board	E3653-A03	1
2	4T1 cable (length: 0.3 m)	LI-FCB-4T1-SS-0.3M-NP-A0	1
3	Fakra cable (length: 3 m)	FAK-SMZSMZ-3M	4
4	OWL Camera	LI-AR0234CS-GMSL2-OWL	4
5	Standoffs (M2.5*5)	10.05.MU0025050HCN	3
6	Screws (M2.5*4)	10.02.C025040LH4Z17	6



**E3653-A03**



**OWL Camera**



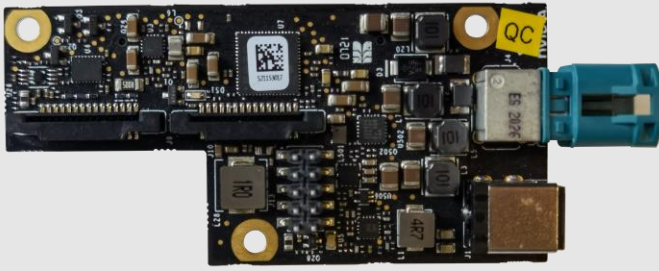
**FAK-SMZSMZ-3M**



**LI-FCB-4T1-SS-0.3M-NP-A0**



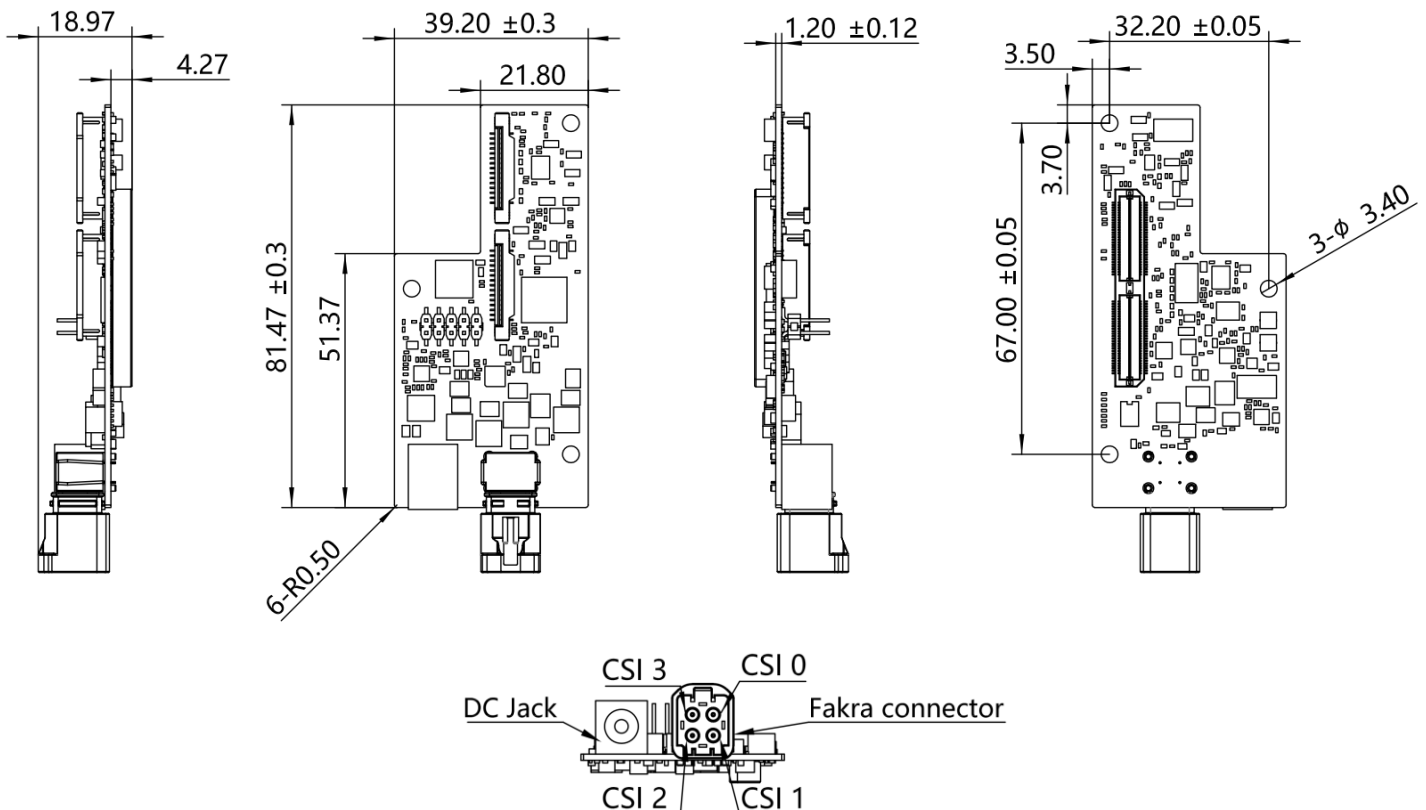
## GMSL2 DeSer Board (E3653-A03)



### TECHNICAL FEATURES

- Compatible with Nvidia® Jetson AGX Xavier™ Developer Kit and AGX Orin™ Developer Kit
- Supports up to 4 GMSL2 cameras
- DeSerializer: Maxim MAX96712
- Weight: ~ 30 g
- Part#: **E3653-A03**

### DIMENSIONS



**NOTE:** Tolerances for others unmarked are ± 0.3 mm.

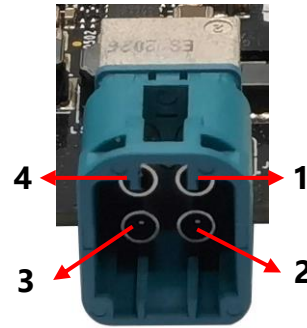
Unit: mm

# GMSL2 DeSer Board (E3653-A03)

## INTERFACES

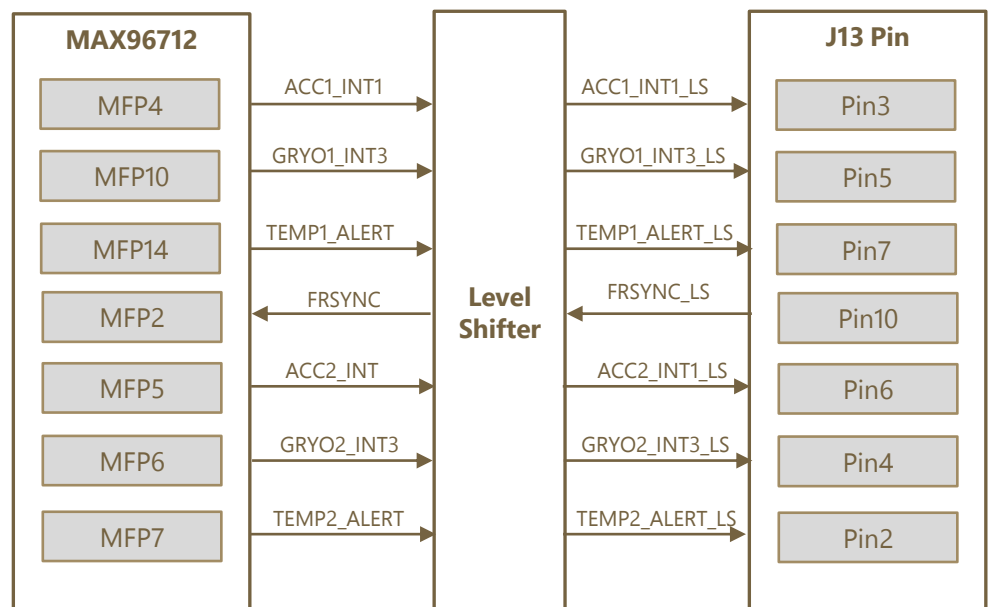
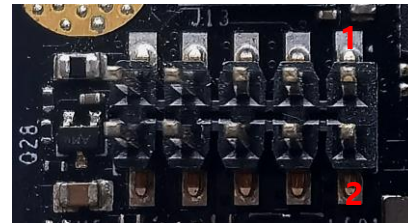
### Interface J4 (FAKRA)

- Part#: 1-2304168-9
- Number of positions: 4



### Interface J13 (GPIO Header for IMU)

- Part#: TSM-105-01-T-DV-P-TR
- Number of positions: 10
- IO voltage level: 3V3



## GMSL2 DeSer Board (E3653-A03)

### INTERFACES

#### Interface J1 (External 19V)

- Part#: PJ-082BH
- Number of positions: 2
- Connector type: Jack
- Inner diameter (mm): 2.5
- Outer diameter (mm): 6.5

**NOTE:**

External 19V power supply is NOT needed for the LI-XAVIER-KIT-OWL-Q camera kit.



#### Interface J501 (To Xavier Kit)

- Part#: QTH-060-01-H-D-A
- Number of positions: 120
- Pitch: 0.5 mm
- Number of Rows: 2



## 4T1 Cable (LI-FCB-4T1-SS-0.3M-NP-A0)



### TECHNICAL FEATURES

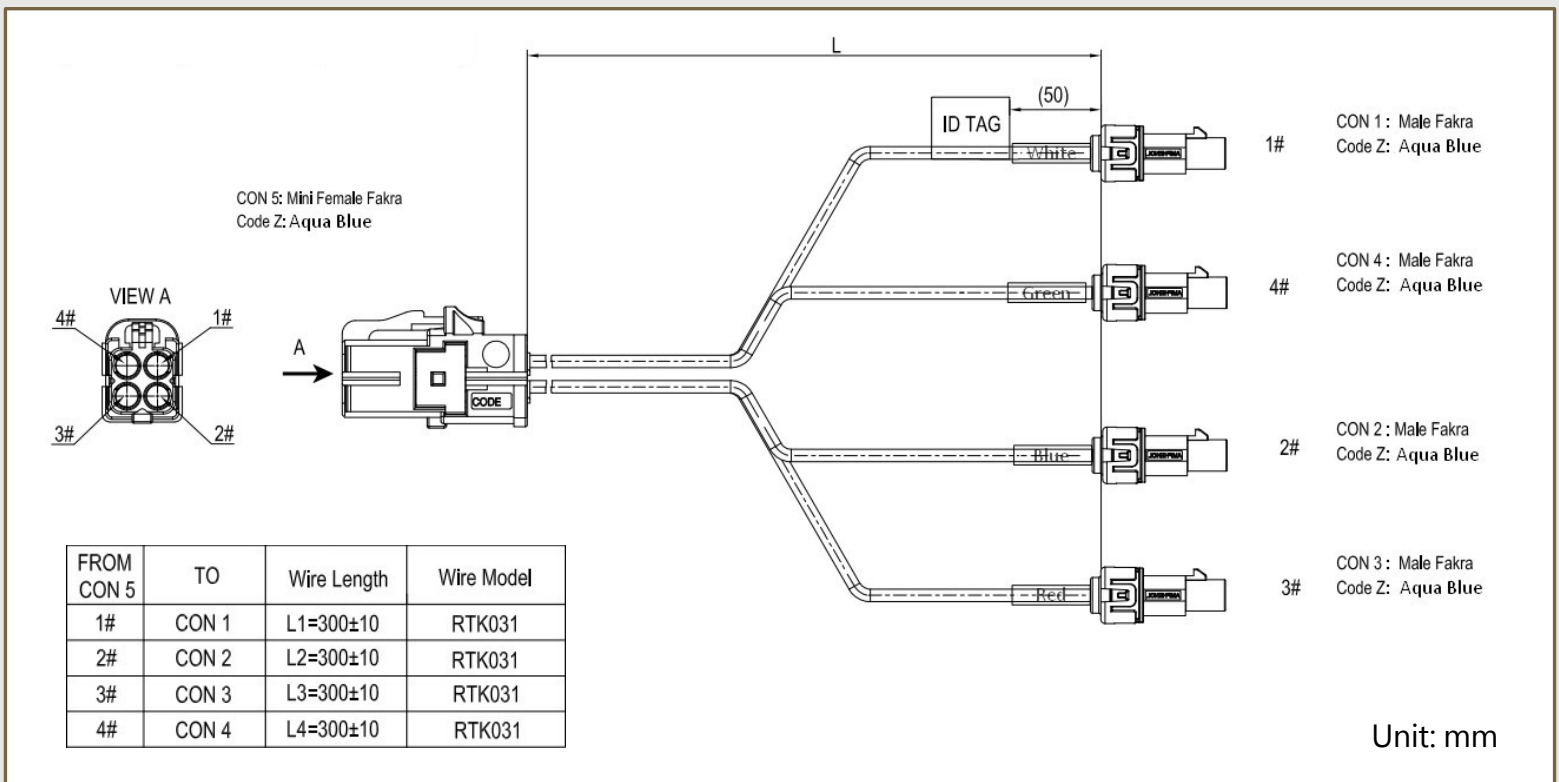
- Supports multiple length Farka cable from Leopard Imaging, including FAK-SMZSMZ-6M, FAK-SMZSMZ-5M and FAK-SMZSMZ-3M.

**NOTE:** FAK-SMZSMZ-3M is the default Fakra cable used in LI-XAVIER-KIT-OWL-Q. For other length, you could purchase via the following address:

- FAK-SMZSMZ-6M: <https://leopardimaging.com/product/accessories/cables/fak-smzsmz-6m/>
- FAK-SMZSMZ-5M: <https://leopardimaging.com/product/accessories/cables/fak-smzsmz-5m/>

- Its Mini Female Fakra connector is compatible with Nvidia Jetson platform
- Length:  $300 \pm 10$  mm
- Weight:  $\sim 42$  g
- Part#: **LI-FCB-4T1-SS-0.3M-NP-A0**

### MECHANICAL DIAGRAM



## OWL Camera (LI-AR0234CS-GMSL2-OWL)



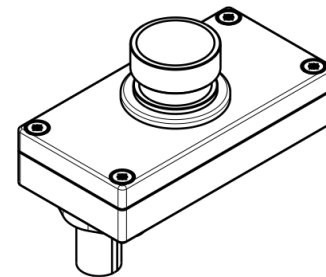
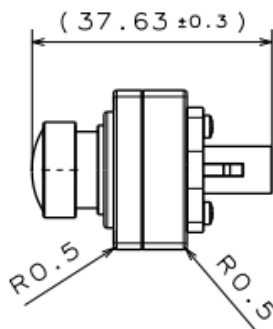
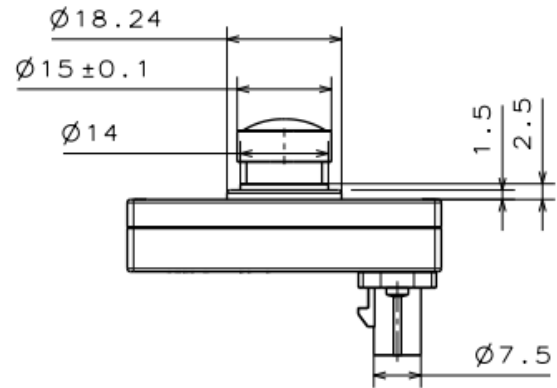
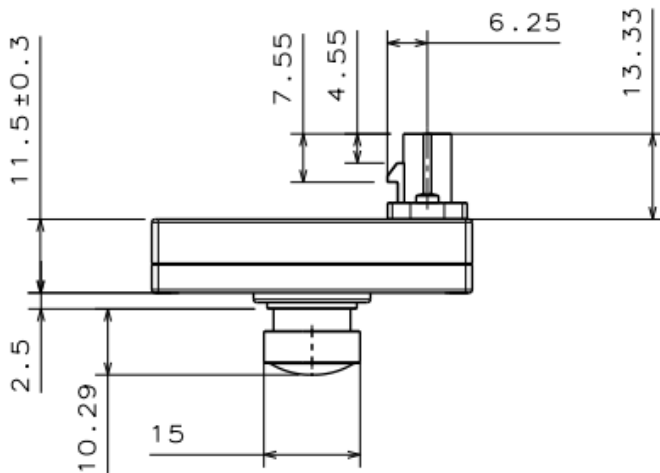
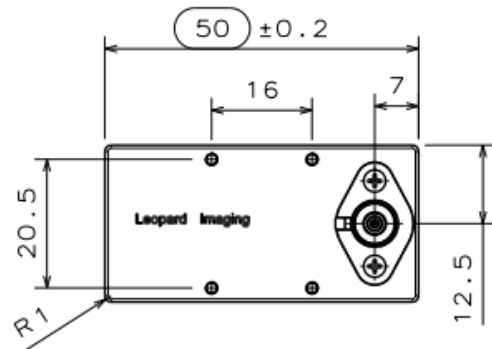
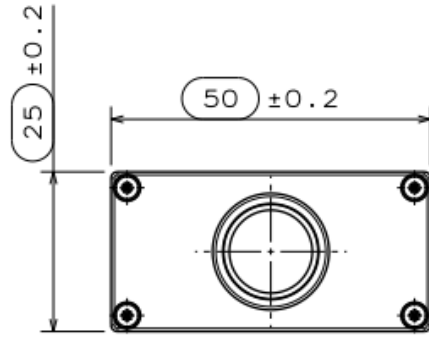
### CAMERA SPECIFICATIONS

Sensor	ON Semiconductor CMOS Image Sensor AR0234CS
Optical Format	1/2.6"
Resolution	1920 (H) x 1200 (V)
Pixel Size	3.0 x 3.0 $\mu\text{m}$
Output Format	10-bit RAW data
Frame Rate	120 fps @ full resolution
Shutter	Global shutter
Serializer	Maxim MAX9295A/B
Color / Mono	Color sensor
FAKRA Connector	FAKRA Z TYPE
Certification	FCC, CE
Power Supply Range	9 ~ 19 VDC
Power Consumption	70 mA @ 12 VDC
Weight	~ 37 g
Part#	LI-AR0234CS-GMSL2-OWL




# OWL Camera (LI-AR0234CS-GMSL2-OWL)

## DIMENSIONS



**NOTE:**

-  marked are important sizes.
- All materials are compliant with RoHS requirements.
- Tolerances for others unmarked are  $\pm 0.3$  mm.

Unit: mm

## ● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	22 Oct 2021
1.1	<ol style="list-style-type: none"><li>1. Deleted "Quantum Efficiency" section.</li><li>2. Added cable info.</li><li>3. Added weight and camera order info on Page 2.</li><li>4. Replaced schematics with actual interface pics in "E3653-A03" section.</li></ol>	05 Dec 2023

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