



LEOPARD
IMAGING

LI-AGO-ADP-HAWK-D



Address:

910 Auburn Ct
Fremont, CA 94538
USA



Phone:

+1 (408)263-0988

Fax:

+1 (408)217-1960



Sales:

sales@leopardimaging.com

Support:

support@leopardimaging.com

KEY FEATURES

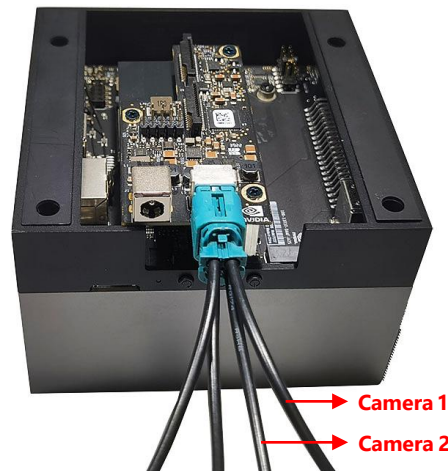
- Compatible with NVIDIA® Jetson AGX Orin™ Developer Kit
- Adapter board: E3653-A03
- Sensor: ON Semiconductor 2.3MP CMOS image sensor AR0234CS
- Active pixels: 1920 (H) x 1200 (V)
- Color camera
- Connector: FAKRA connector FAKRA Z TYPE
- Allows customization
- Weight: ~ 457 g (E3653-A03 adapt + LI-JTX1-SUB-ADPT + 2 HAWK cameras)
- Part#: **LI-AGO-ADP-HAWK-D**

LENS SPECIFICATIONS

Focal Length	2.8 mm
Aperture, F/#	2.0
Field of View (FOV)	147.5° diagonal
	121.5° horizontal
	73.5° vertical
Optical Distortion	< -65.3%
Relative Illumination	> 30.0%
IR Filter	650 nm IR cut filter
Glass Cover	No
Lens Mount	Active Alignment (AA)

APPLICATIONS

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



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 Orin™ Developer Kit is **NOT** included.

BOM DETAILS

Nvidia® Jetson AGX Orin™ Developer Kit is NOT included.

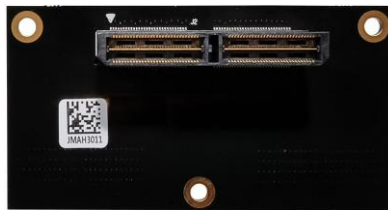
#	Items	QTY
1	E3653-A03 adapter board	1
2	LI-JTX1-SUB-ADPT (high connector)	1
3	LI-FCB-4T1-SS-0.3M-NP-A0 cable (length: 0.3m)	1
4	FAK-SMZSMZ-3M (length: 300 mm)	2
5	LI-AR0234CS-STEREO-GMSL2-30 (HAWK)	2



1. E3653-A03



2. LI-JTX1-SUB-ADPT



3. Cable



FAK-SMZSMZ-3M

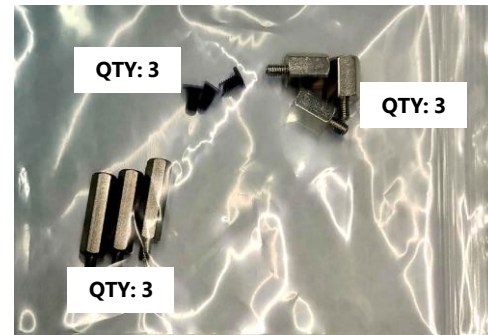


LI-FCB-4T1-SS-0.3M-NP-A0

4. HAWK Camera



Screws and Standoffs



Screws and standoffs are packed in a bag and not assembled.

Assembling Instruction



1. Fasten the standoffs to the kit. Do NOT touch any components while assembling.

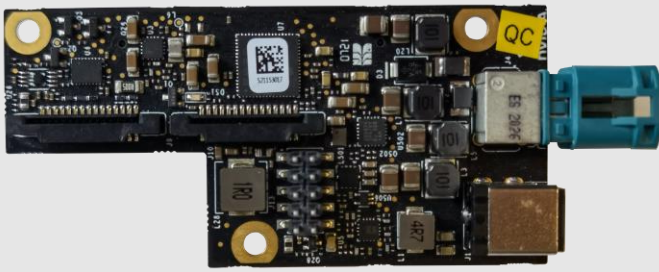


2. Use these standoffs to fasten LI-JTX1-SUB-ADPT.



3. Use these screws to fix E3653-A03 and LI-JTX1-SUB-ADPT.

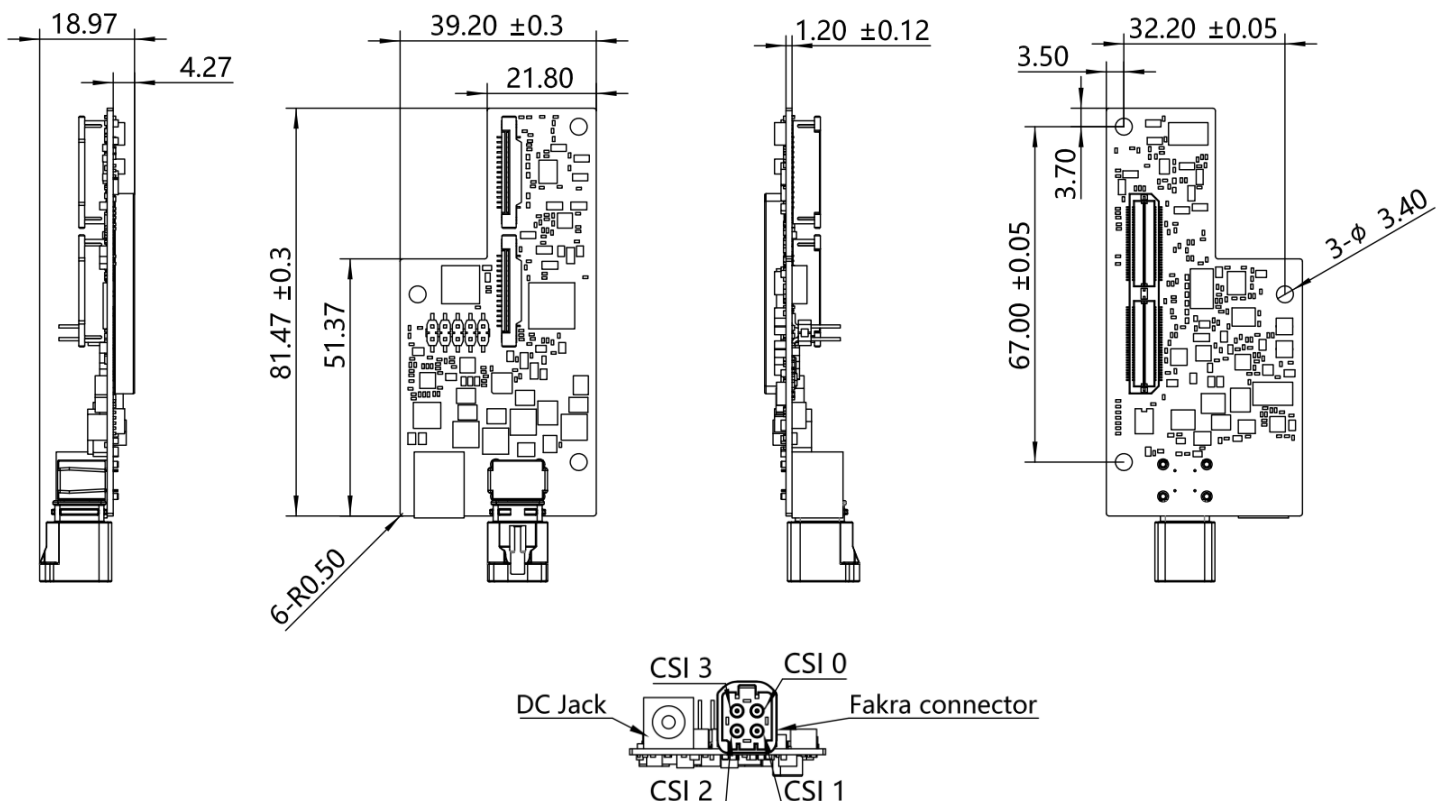
GMSL2 DeSer Board(E3653-A03)



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.

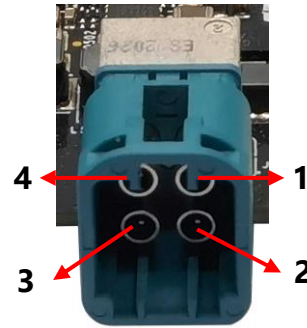
Unit: mm

GMSL2 DeSer Board(E3653-A03)

INTERFACES

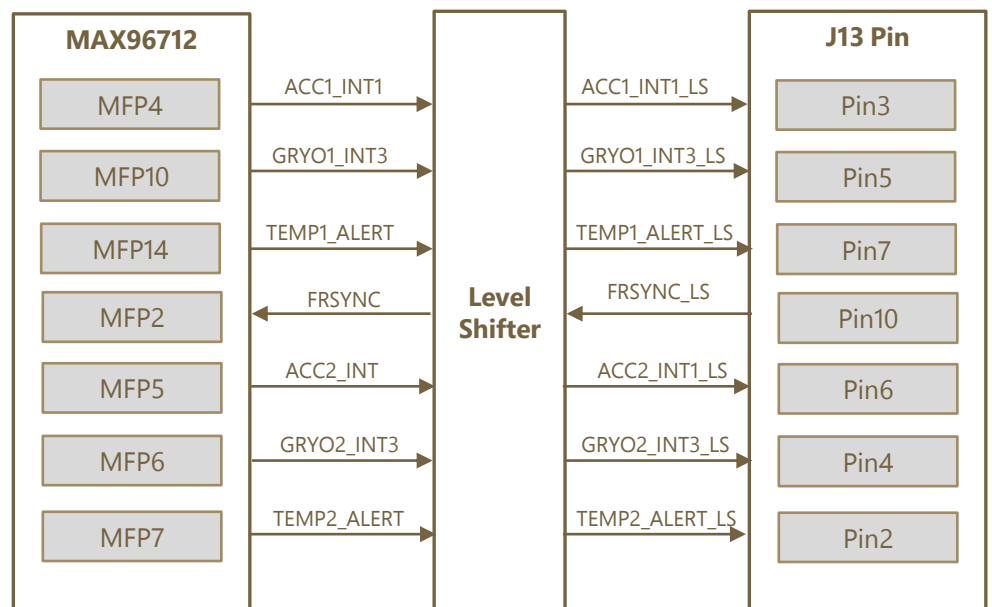
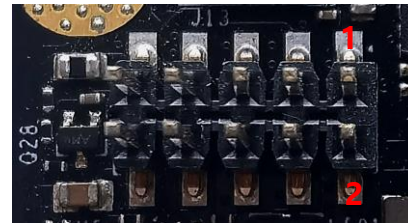
Interface J4 (FAKRA)

- 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-AGO-ADP-HAWK-D camera kit.

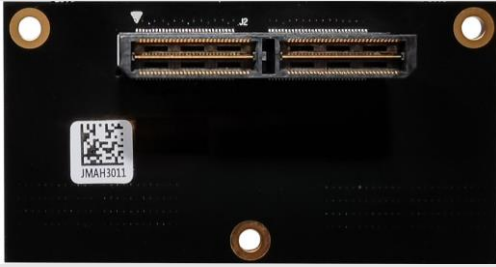


Interface J501 (To LI-JTX1-SUB-ADPT)

- Part#: QTH-060-01-H-D-A
- Number of positions: 120
- Pitch: 0.5 mm
- Number of Rows: 2
- Connected to J1 interface on LI-JTX1-SUB-ADPT which part# is QSH-060-01-H-D-A



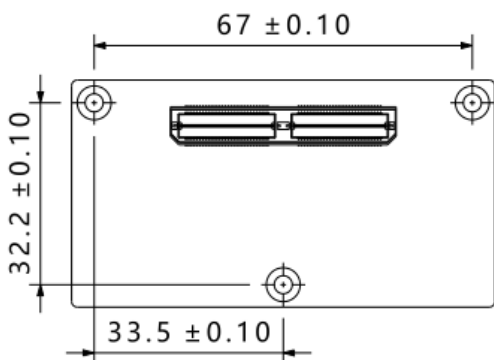
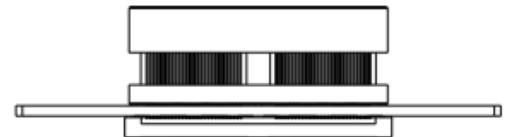
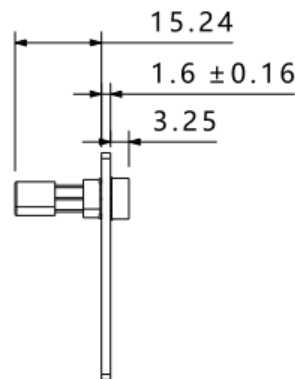
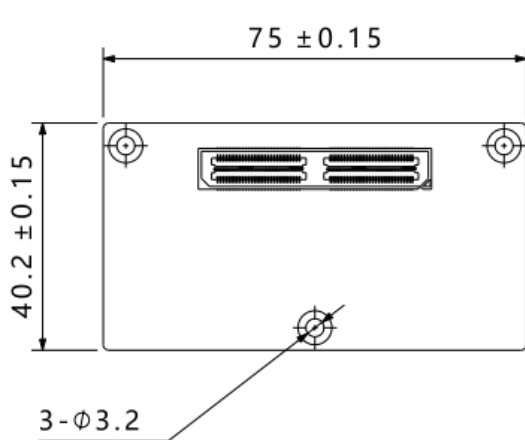
Spacer Board (LI-JTX1-SUB-ADPT)



TECHNICAL FEATURES

- Used as a standoff adapt board to NVIDIA® Jetson AGX Orin™ Developer Kit or Xavier™ Developer Kit
- Dimensions: 75.0 (L) x 40.2 (W) x 20.1 (D) mm
- Weight: ~ 19 g
- Part#: **LI-JTX1-SUB-ADPT**

DIMENSIONS



TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5 < X ≤ 3	±0.1	0.5 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30'
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20'
30 < X ≤ 120	±0.3	X > 30	±2	120 < X ≤ 400	±10'
120 < X ≤ 400	±0.5			X > 400	±5'
400 < X ≤ 1000	±0.8				
X > 1000	±1.2				

NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked refer to the Tolerance table.

Unit: mm

Spacer Board (LI-JTX1-SUB-ADPT)

INTERFACES

Interface J1 (To E3653-A03)

- Part#: QSH-060-01-H-D-A
- Number of Positions: 120
- Number of Rows: 2
- Pitch: 0.50 mm
- Connected to J501 interface on E3653-A03 which part# is QTH-060-01-H-D-A



Interface J2 (To Nvidia Developer Kit)

- Part#: QTH-060-04-H-D-A-TR
- Number of Positions: 120
- Number of Rows: 2
- Pitch: 0.5 mm
- Connected to Nvidia Orin Developer Kit



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



TECHNICAL FEATURES

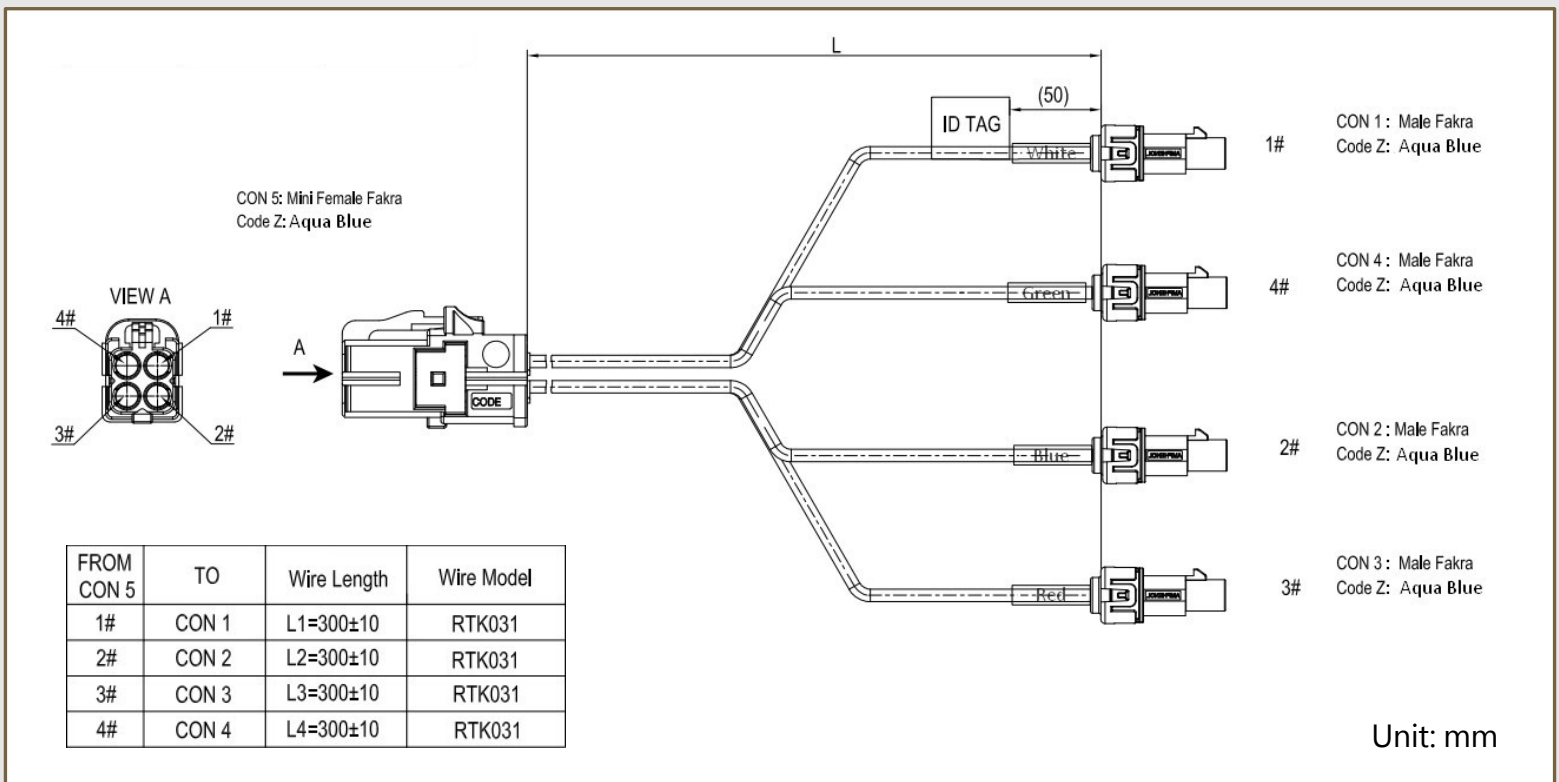
- Supports multiple length Farka cable from Leopard Imaging, including FAK-SMZSMZ-6M, FAK-SMZSMZ-5M and FAK-SMZSMZ-3M.

NOTE: **FAK-SMZSMZ-3M** is the default Fakra cable used in LI-AGO-ADP-HAWK-D. 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 ± 10 mm
- Weight: ~ 42 g
- Part#: **LI-FCB-4T1-SS-0.3M-NP-A0**

MECHANICAL DIAGRAM



HAWK Camera (LI-AR0234CS-STEREO-GMSL2-30)



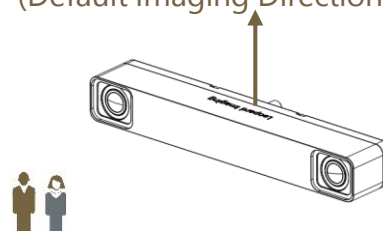
CAMERA SPECIFICATIONS

Sensor	ON Semiconductor 2.3MP CMOS Image Sensor AR0234CS
Optical Format	1/2.6"
QTY of Sensor	2
Resolution	1920 (H) x 1200 (V) (active pixels)
Pixel Size	3.0 x 3.0 μm
Baseline	150.00 mm
Recommended Working Distance	1.0 ~ 8.0 m
Output Format	10-bit RAW data
Frame Rate	60 fps @ 1920 x 1200
Shutter	Global shutter
Serializer	Maxim GMSL2
Color / Mono	Color sensor
FAKRA Connector	FAKRA Z TYPE
Certification	FCC, CE
Weight	~ 204 g
Power Supply Range	9 ~ 19 VDC
Part#	LI-AR0234CS-STEREO-GMSL2-30

DEFAULT IMAGING DIRECTION

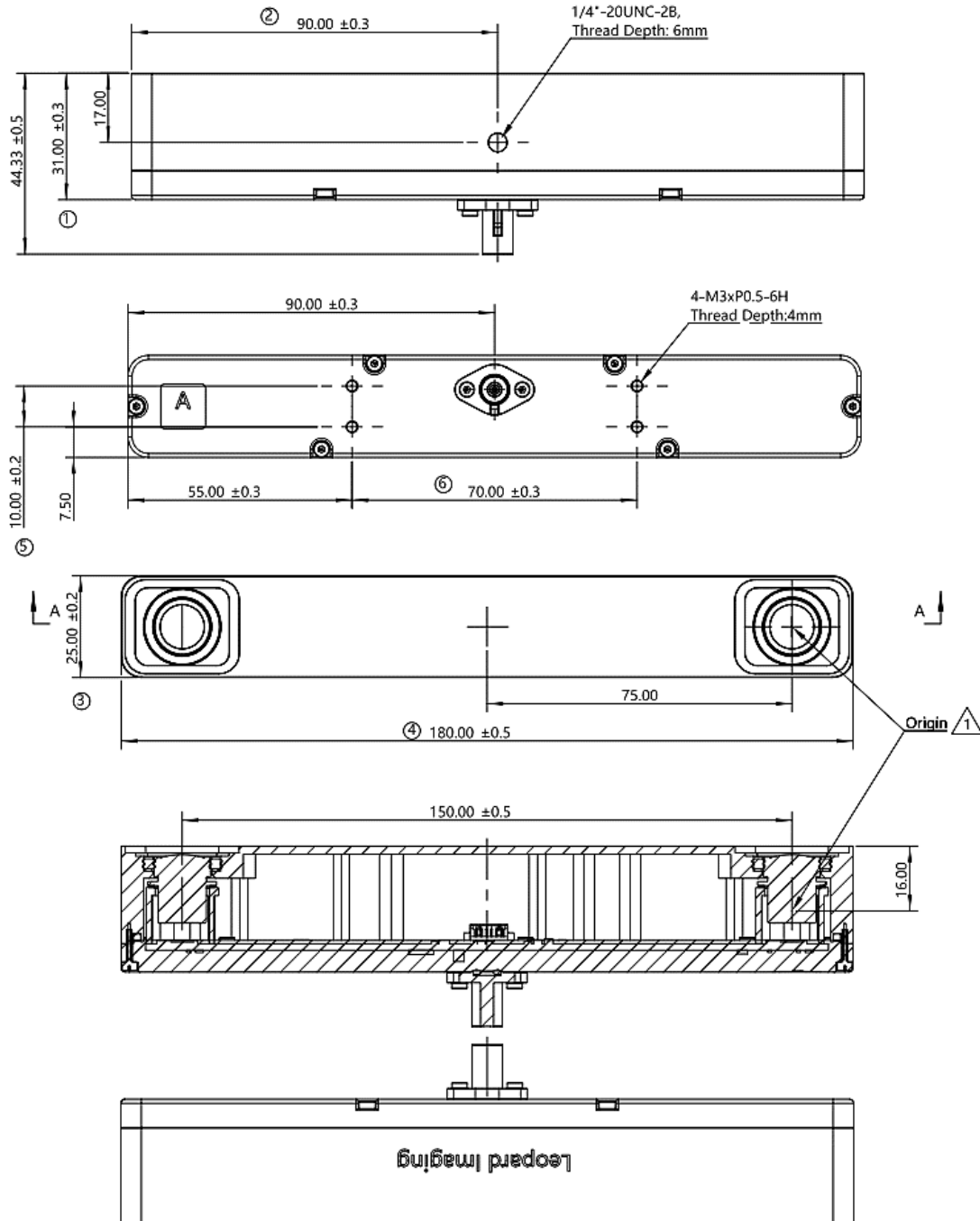
- The logo "Leopard Imaging" is on the TOP.

TOP (Default Imaging Direction)



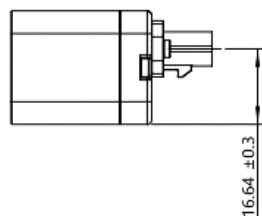
HAWK Camera (LI-AR0234CS-STEREO-GMSL2-30)

DIMENSIONS



NOTE:

- Other unmarked tolerances are ± 0.3 mm.
- ⊗ marked are important sizes.
- △ marked is revision version.
- For unmarked sizes, refer to 3D model.
- All materials are compliant with RoHS requirements.



Unit: mm

● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	03 Nov 2023
1.1	Updated cable info and title for each part.	20 Nov 2023
1.2	Updated 2D of HAWK camera.	09 Apr 2024

910 Auburn Ct, Fremont, CA 94538, USA

Phone: +1-408-263-0988

Fax: +1-408-217-1960

Email: sales@leopardimaging.com

Website: www.leopardimaging.com

