Direct Drive Tech

TITA-GMSL2-CAMERA

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INTRODUCTION

The TITA Camera is equipped with ON Semiconductor 2.3MP CMOS digital image sensor AR0234CS, capable of producing clear, low noise images in both low-light and bright scenes. This stereo camera outputs 1920 × 1200 RAW data from each sensor.The following data is all provided by the original manufacturer.

SPECIFICATIONS

Sensor	ON Semiconductor 2.3MP CMOS Image Sensor AR0234CS	Shutter	Global shutter
		Serializer	Maxim MAX9295D
QTY of Sensor	2	Power Supply Range	9 ~ 19 VDC
Optical Format	1/2.6"	IMU	Included
Resolution	1920 (H) × 1200 (V) (active pixels)	FAKRA Connector	FAKRA Z TYPE
Pixel Size	3.0 × 3.0 µm	IP Rating	IP65
Recommended Working Distance	1.0 ~ 8.0 m	Power Consumption	118 mA @ 12 VDC (2 * 1920 × 1200 @ 60 fps)
Output Format	0-bit RAW	Operating Temp	-20°C ~ +50°C
Baseline	150.00 ± 0.5 mm	Storage Temp	-40°C ~ +70°C
Color / Mono	Color sensor	Weight	~ 204 g
Frame Rate	60 fps @ 1920 × 1200	Size	180.0(L)×25.0(W)×44.33 (D) mm

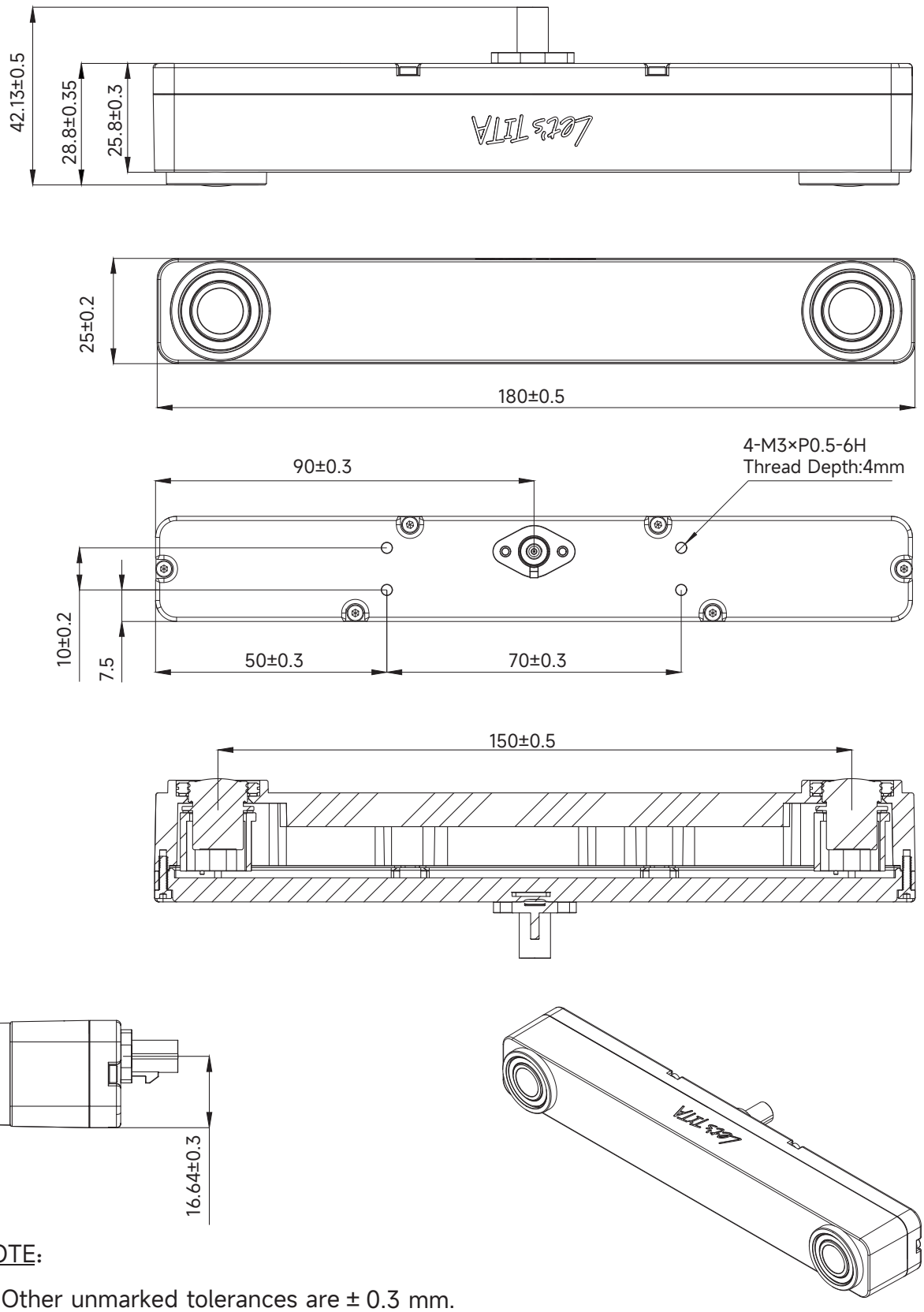
APPLICATIONS

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

LENS SPECIFICATIONS

Focal Length	2.8mm	Optical Distortion	< -65.3%
Aperture, F/#	2.0	Relative Illumination	>30%
Field of View (FOV)	147.5°diagonal	Glass Cover	No
	121.5° horizontal	IR Filter	650 nm IR cut filter
	73.5°vertical	Lens Mount	Active Alignment (AA)

DIMENSIONS



NOTE:

- Other unmarked tolerances are ± 0.3 mm.
- ⊗ marked are important sizes.
- For unmarked sizes, refer to 3D model.

Unit: mm

DEPTH PERFORMANCE

SPEC LIMIT (6-Meter Distance)

Metric	Spec Limit(s)
Z-Accuracy	±2% at 6 m distance at 80% depth FOV
Z-STD	±2% at 6 m distance at 80% depth FOV
Z-Distortion	±2% at 6 m distance at 80% depth FOV
Z-Fill-Rate	±0.1% at 6 m distance at 80% depth FOV

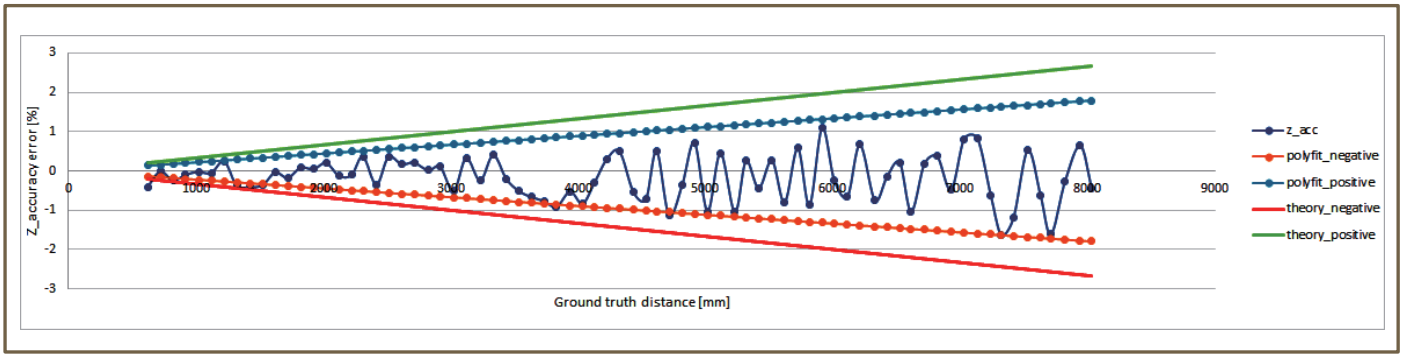
DISTANCE & Z-ACCURACY

NOTE:

Z-STD, Z-DISTORTION, Z-Fill-Rate has little difference for the distance from 1.0 m to 8.0 m.

Distance	Z-Accuracy
1 meterz	< 0.33%
2 meters	< 0.66%
3 meters	< 0.99%
4 meters	< 1.32%
5 meters	< 1.65%
6 meters	< 2.00%
7 meters	< 2.31%
8 meters	< 2.64%

MEASURED DATA GRAPH



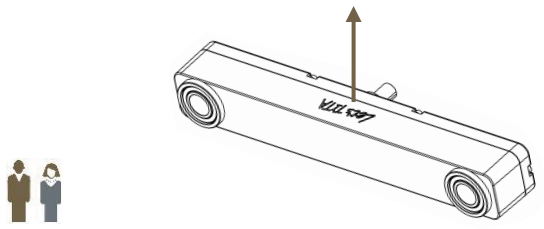
Test Condition:

1. Target to generate depth image: random_target.bmp (image on the right)
2. The same ROI is selected under all measured distances.
3. ROI size: 100 (W) x 50 (H) pixels

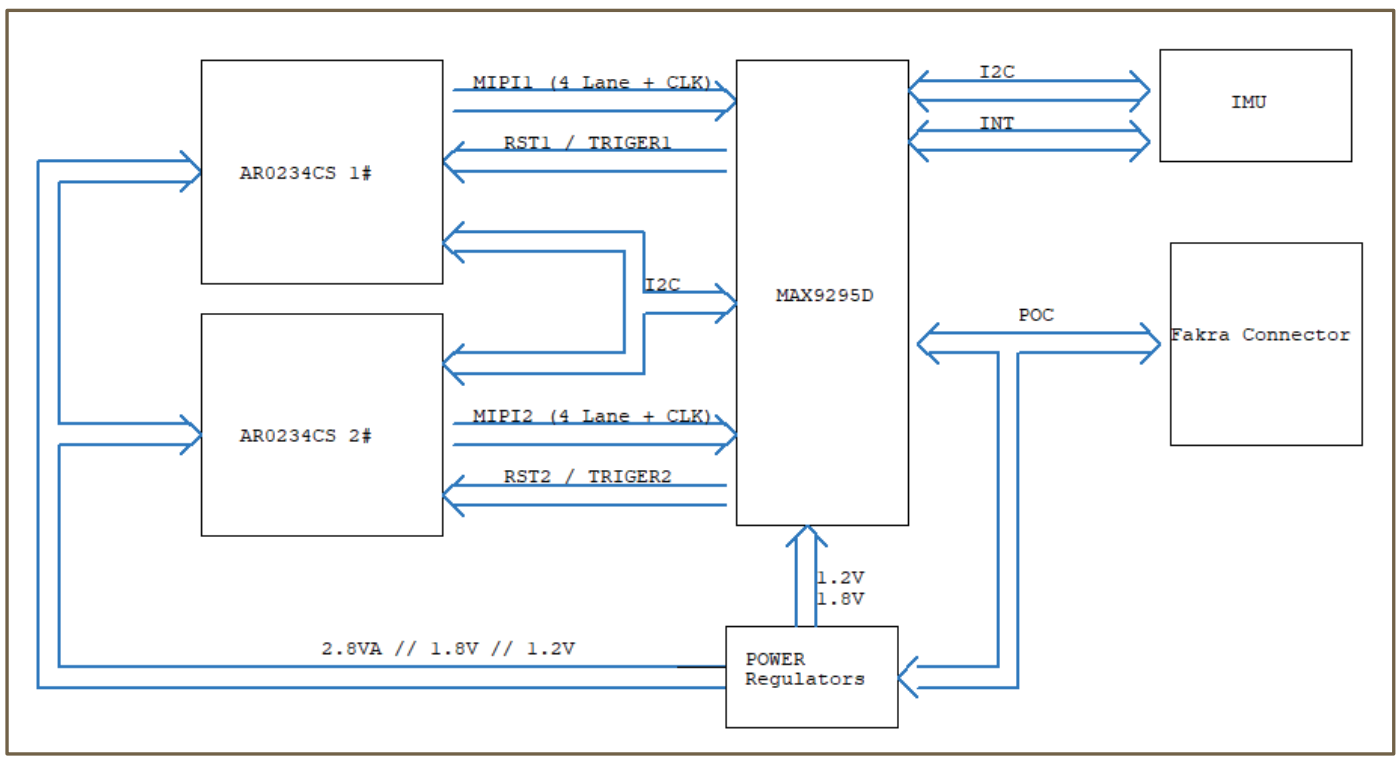
DEFAULT IMAGING DIRECTION

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

TOP (Default Imaging Direction)



BLOCK DIAGRAM



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