



LEOPARD
IMAGING

LI-AR0231-AP0200-GMSL2-xxxH



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

INTRODUCTION

The LI-AR0231-AP0200-GMSL2-xxxH is equipped with ON Semiconductor 1/2.7" 2.3MP CMOS digital image sensor AR0231, AP0200 ISP and Maxim GMSL2 serializer MAX9295A/B. This camera outputs fine tuned YUV422 image data with WDR (Wide Dynamic Range) supported.

KEY FEATURES

Sensor	ON SEMI 2.3MP CMOS Sensor AR0231
Optical Format	1/2.7"
Maximum Resolution	1920 (H) x 1020 (V)
Pixel Size	3.0 x 3.0 μm
Data Format	Fine tuned YUV422, 10-bit
Color / Mono	Color sensor
Frame Rate	28.7 fps @ 1920 x 1020
ISP	ON SEMI AP0200
WDR (Wide Dynamic Range)	Supported
Lens	FOV H 60° / 120° / 200°
Serializer	Maxim MAX9295A/B
Power Supply Range	9 ~ 19 VDC
Connector	FAKRA Z TYPE
IP Rating	FOV H 60° / 120°: IP67 FOV H 200°: IP69K
Power Consumption	Approx. 116 mA @ 12 VDC
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +105°C
Weight	~ 50 g
Part#	LI-AR0231-AP0200-GMSL2-xxxH

APPLICATIONS

- Automotive ADAS
- ADAS + Viewing Fusion

IMAGE ORIENTATION



CABLE CONNECTOR

- Housing Connector:
FAKRA Z Type
- Cable Length:
3 meters
- Cable Part#:
FAK-SMZSMZ-3M



LI-AR0231-AP0200-GMSL2-060H



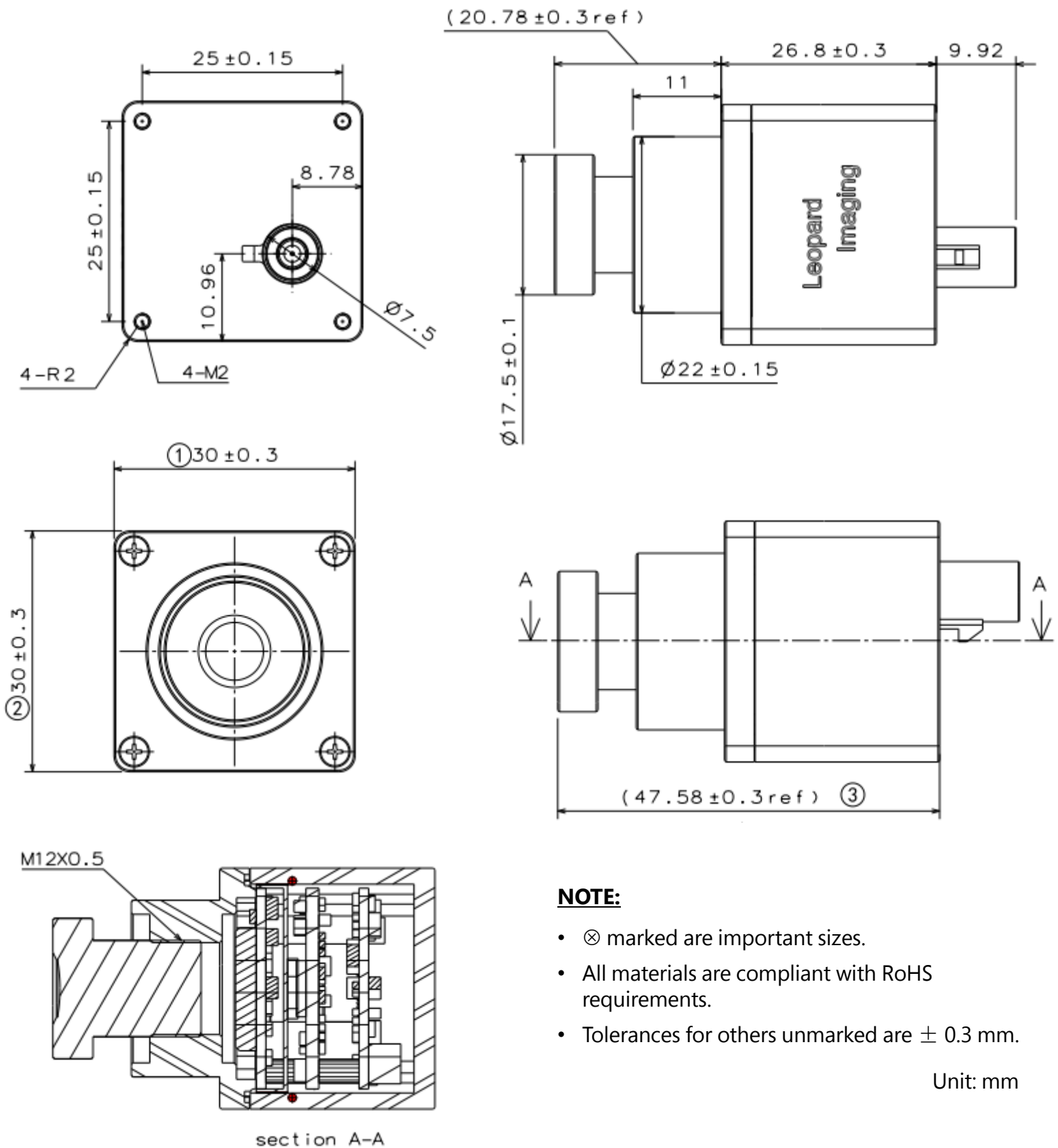
LI-AR0231-AP0200-GMSL2-120H



LI-AR0231-AP0200-GMSL2-200H



DIMENSIONS: LI-AR0231-AP0200-GMSL2-060H

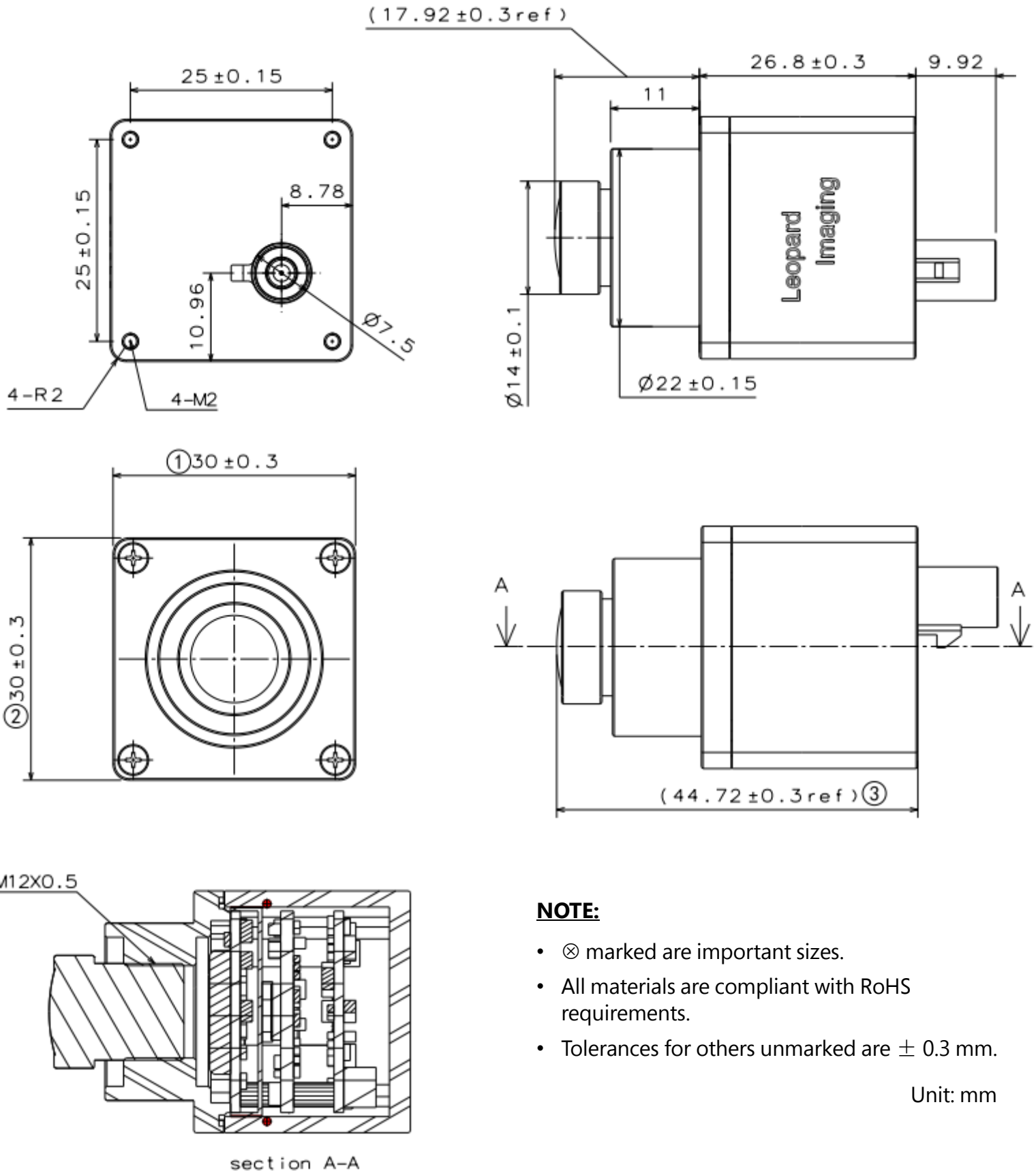


NOTE:

- ⊗ marked are important sizes.
- All materials are compliant with RoHS requirements.
- Tolerances for others unmarked are ± 0.3 mm.

Unit: mm

DIMENSIONS: LI-AR0231-AP0200-GMSL2-120H

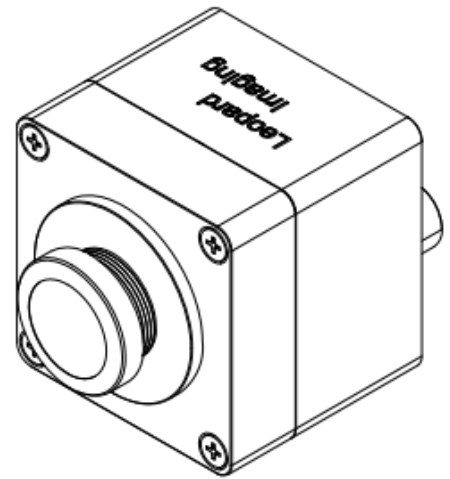
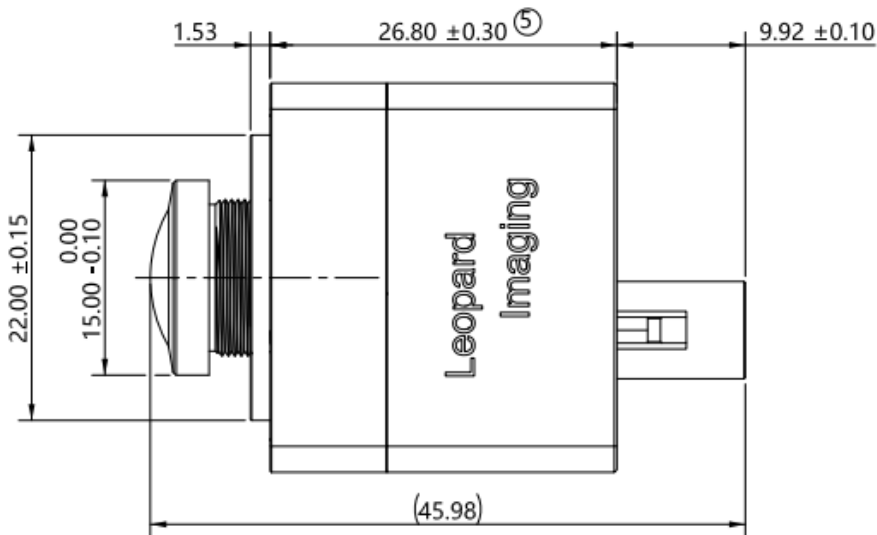
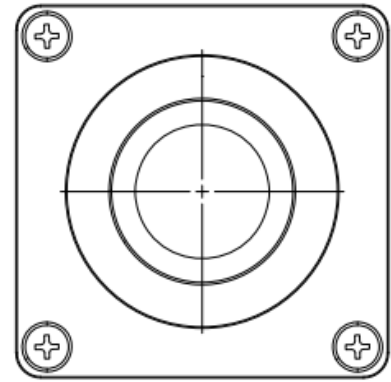
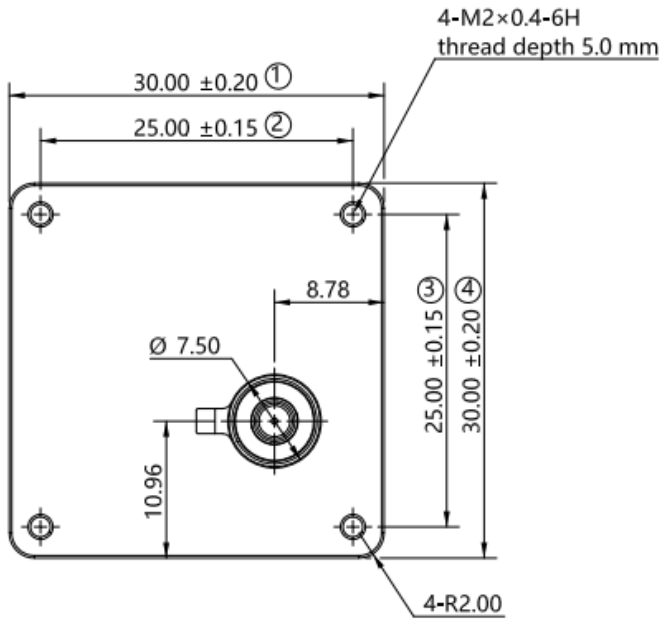


NOTE:

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

Unit: mm

DIMENSIONS: LI-AR0231-AP0200-GMSL2-200H



NOTE:

- ⊗ marked are important sizes.
- All materials are compliant with RoHS requirements.
- Tolerances for others unmarked are ± 0.3 mm.

Unit: mm

ORDERING INFORMATION

NOTE:

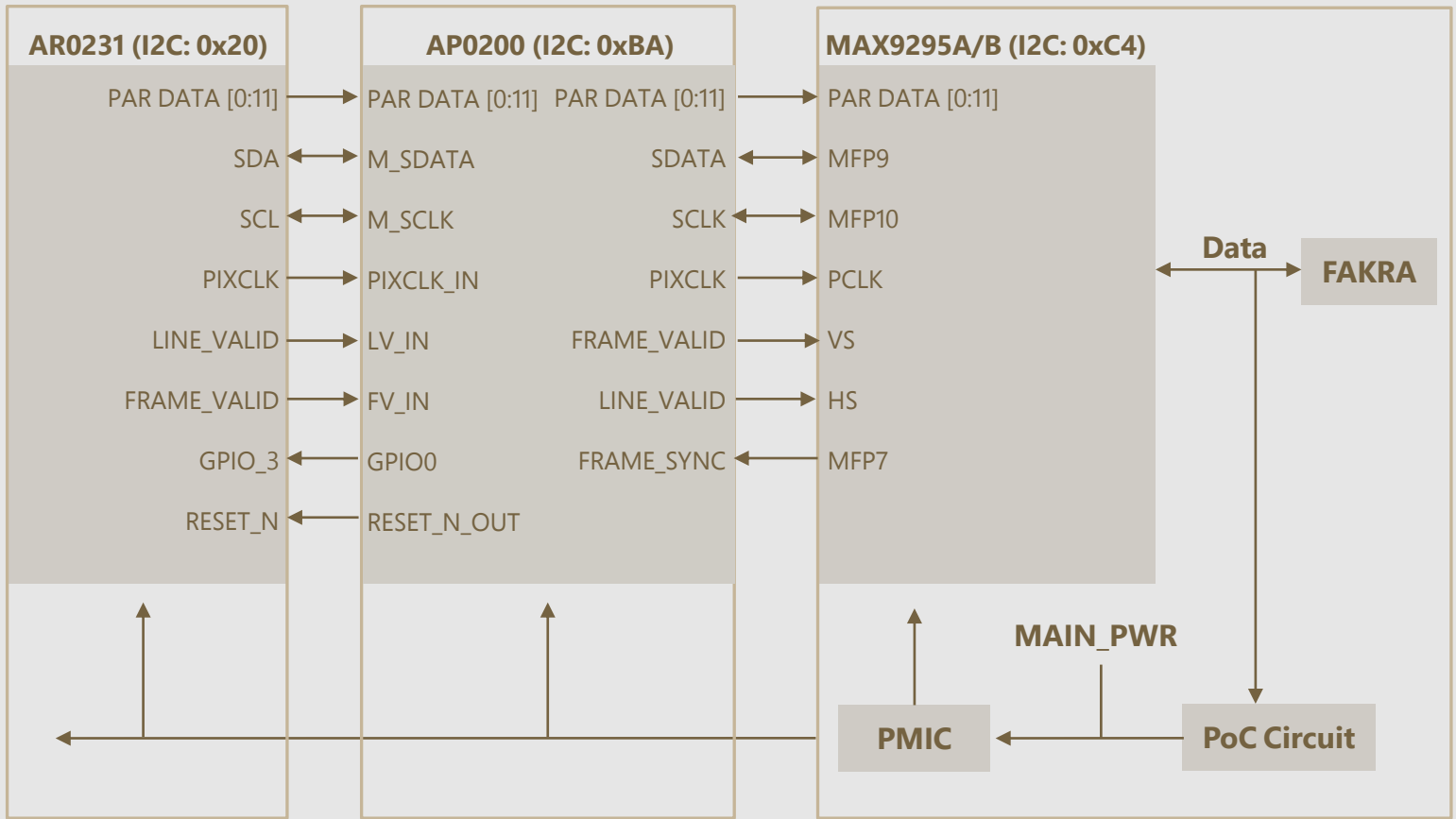
xxxH refers to 060H (FOV H 60°), 120H (FOV H 120°) or 200H (FOV H 200°)

LI-AR0231-AP0200-GMSL2-060H

Lens EFL: 6.0 mm
Aperture, F/#: 1.8
Field of View (FOV): 74.5° (D) / 60.6° (H) / 36.1° (V)
Mount: M12

LI-AR0231-AP0200-GMSL2-120H	LI-AR0231-AP0200-GMSL2-200H
	
Lens EFL: 2.8 mm	Lens EFL: 0.95 mm \pm 5%
Aperture, F/#: 2.0	Aperture, F/#: 2.0 \pm 5%
Field of View (FOV): 148° (D) / 122° (H) / 74° (V)	Field of View (FOV): 200° (H)
Mount: M12	Mount: M12

SYSTEM BLOCK DIAGRAM



NOTE:

- PAR is the abbreviation for Parallel.

USB3.0 CAMERA KIT

LI-GMSL2-USB-BOX



Front View



Side View

LI-AR0231-AP0200-GMSL2-xxxH can connect to LI-GMSL2-USB-BOX as a USB 3.0 camera.

Part#: **LI-USB30-AR0231-AP0200-GMSL2-xxxH**

KEY FEATURES

- USB 3.0 Super Speed support
- YUV output without compression
- Supports WDR
- UVC compliant
- Allows customization
- 12 VDC power supply
- Weight: ~ 178 g
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 1920 x 1020 @ 28.7 fps
- Compatible with Windows, Linux OS and other OS which have UVC drivers

BOM

#	Items	QTY
1	LI-AR0231-AP0200-GMSL2-xxxH	1
2	LI-GMSL2-USB-BOX	1
3	3-Meter Fakra Cable	1
4	12 VDC Power Supply	1
5	USB3.0 Cable	1



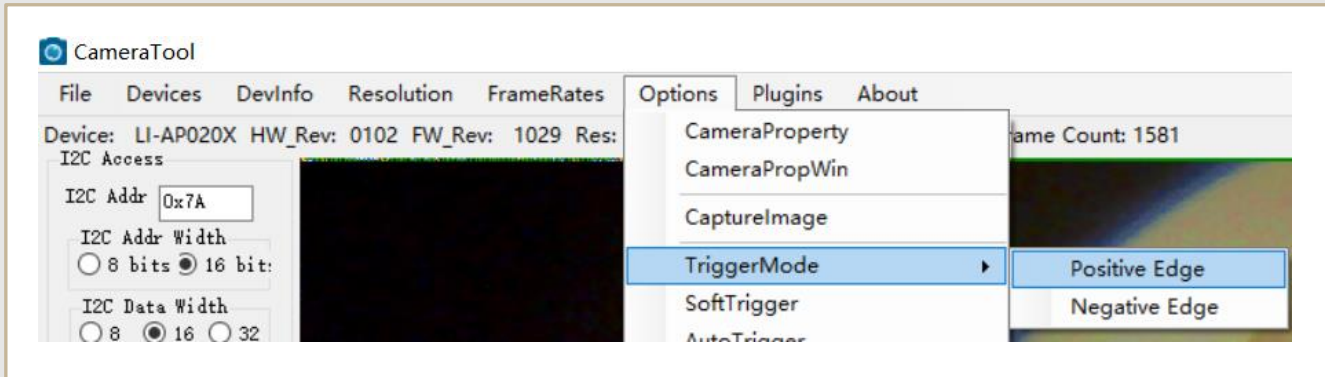
SDK SUPPORTED

- Camera Tool Source Code in C#
- Capture & Display
- ISP Binary Update
- Register Access Function
- Hardware Trigger Mode

How to Use Hardware Trigger

INSTRUCTIONS

1. Click **Options > TriggerMode > Positive Edge / Negative Edge** on the camera tool to enable Trigger mode. The video will stop.



2. Connect the external trigger device to **Pin1 (OPT_IN)** and **Pin5 (GND)** of **J3**. The voltage of trigger signal can be 3.3V ~ 12V.

Once receiving trigger pulses, the camera will output frames.



● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	18 Nov 2021
1.1	Added pinout connections diagram and changed LI-GMSL2-USB-BOX to LI-GMSL2-FP-USB-BOX2 on USB30 page.	24 Feb 2022
1.2	<ol style="list-style-type: none">1. Changed 200H lens to E7393E-R8 and updated related product images and 2D dimensions.2. Changed LI-GMSL2-FP-USB-BOX2 back to LI-GMSL2-USB-BOX.	03 Feb 2023
1.3	Updated IP of 200H lens	01 Nov 2023
1.4	Updated System Block diagram and Image Orientation format.	04 Mar 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

