



LI-AR0231-AP0202-TI913-xxxH



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INTRODUCTION

The LI-AR0231-AP0202-TI913-xxxH is equipped with ON Semiconductor 1/2.7" 2.3MP CMOS digital image sensor AR0231, AP0202 ISP and FPD-Link III serializer TI913. This camera outputs fine tuned YUV image data and supports HDR (Hide Dynamic Range).

KEY FEATURES

Sensor	ON SEMI 2.3MP CMOS Sensor AR0231
Optical Format	1/2.7"
Resolution	1920 (H) x 1080 (V)
Pixel Size	3.0 x 3.0 μm
Data Format	YUV
Color / Mono	Color sensor
Frame Rate	20 fps @ 1920 x 1080
ISP	ON SEMI AP0202
HDR (High Dynamic Range)	Supported
Lens	FOV H 60° / 120° / 200°
Serializer	TI913 FPD-Link III (DS90UB913A-Q1)
Power Supply Range	9 ~ 19 VDC
Connector	FAKRA Z TYPE
IP Rating	FOV H 60° / 120°: IP67 FOV H 200°: TBD
Power Consumption	Approx. 80 mA @ 12 VDC (1920 x 1080 @ 20 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +105°C
Weight	~ 50 g
Part#	LI-AR0231-AP0202-TI913-xxxH

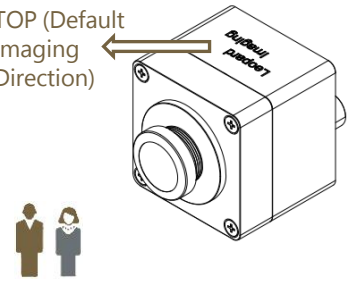
APPLICATIONS

- Automotive ADAS
- 1080p Video Applications
- ADAS + Viewing Fusion

DEFAULT IMAGING DIRECTION

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

TOP (Default Imaging Direction)

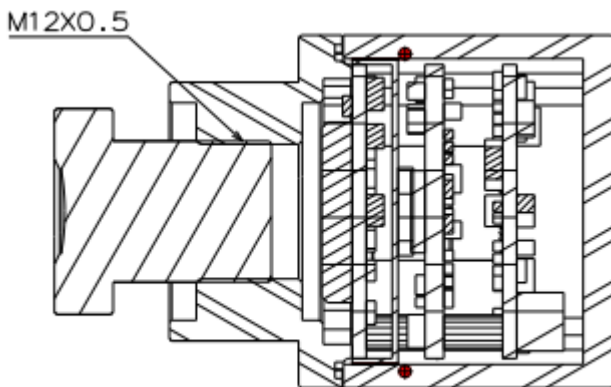
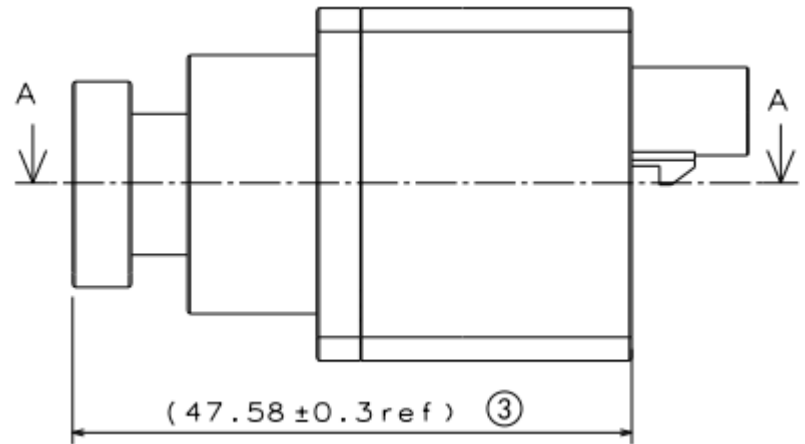
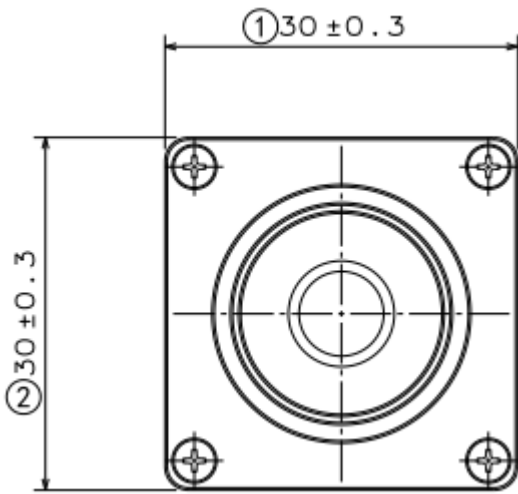
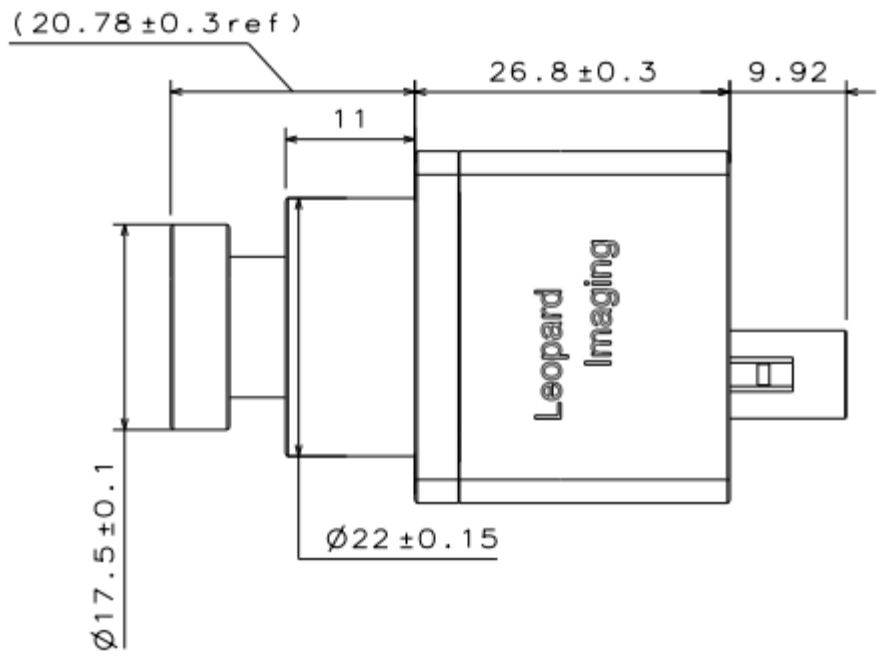
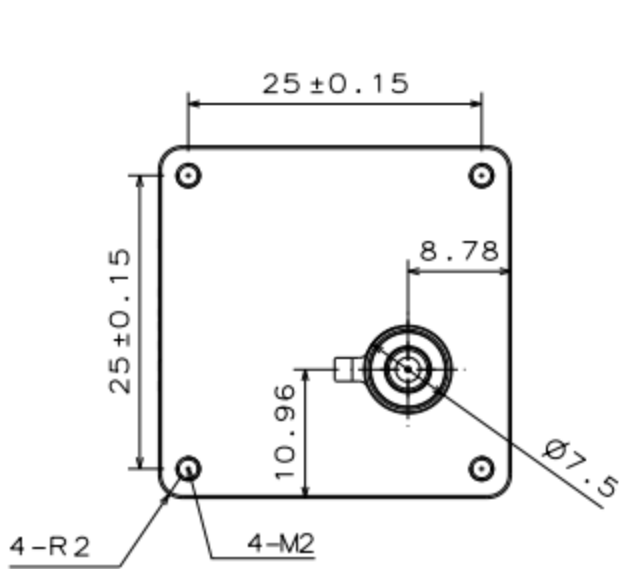


CABLE CONNECTOR

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



DIMENSIONS: LI-AR0231-AP0202-TI913-060H



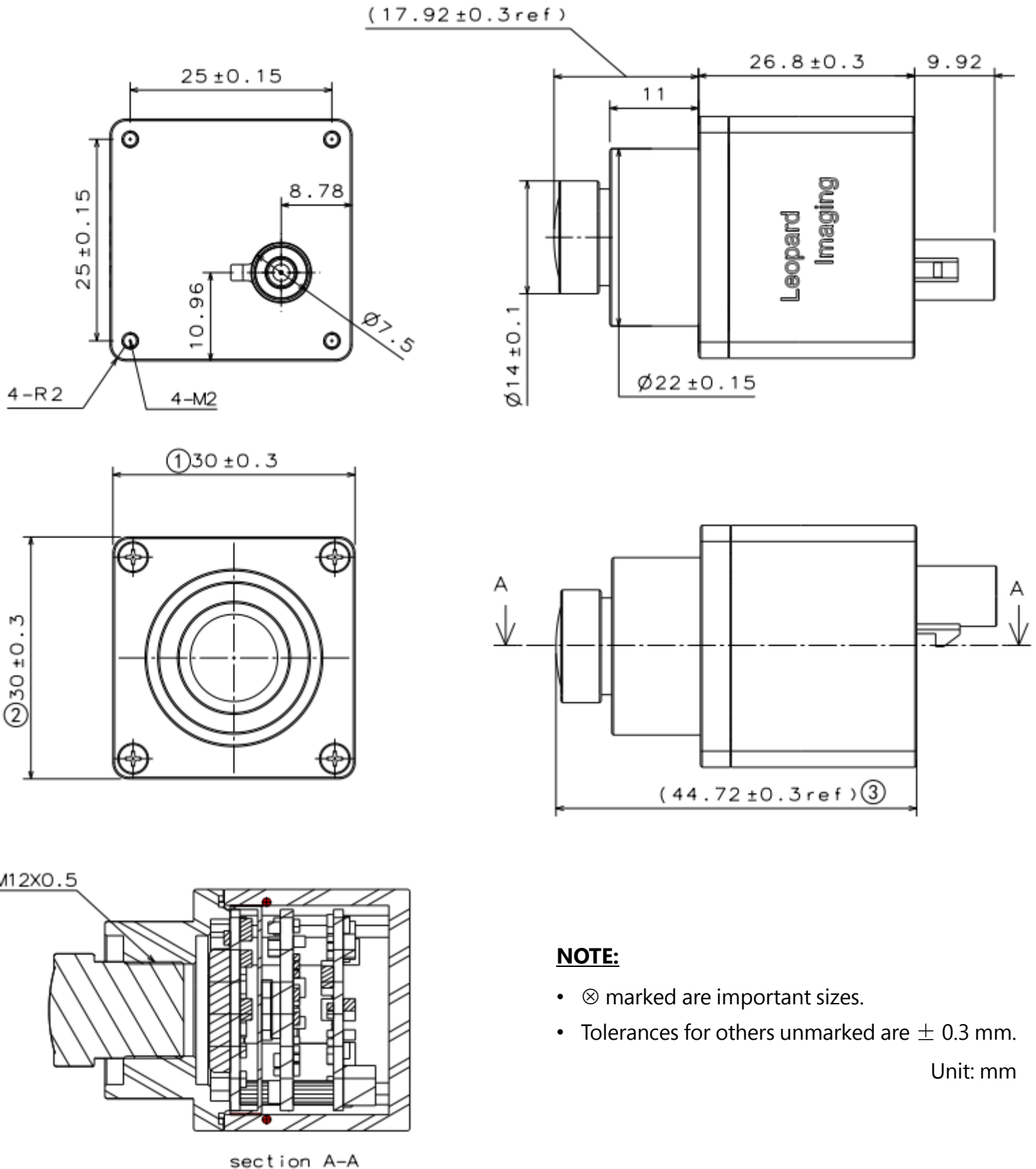
section A-A

NOTE:

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

Unit: mm

DIMENSIONS: LI-AR0231-AP0202-TI913-120H

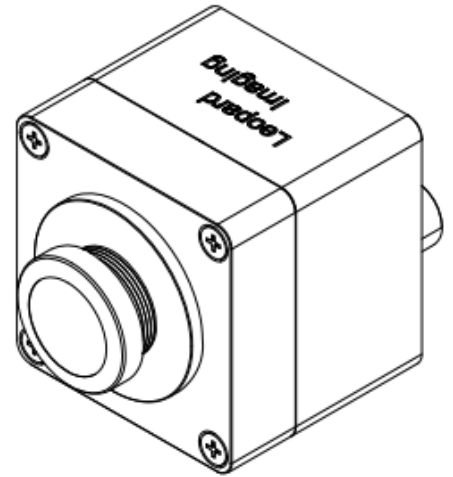
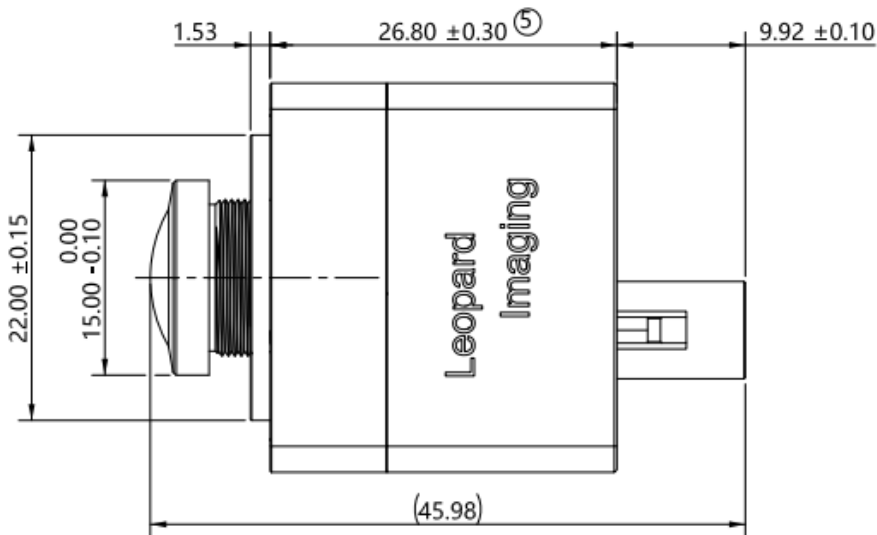
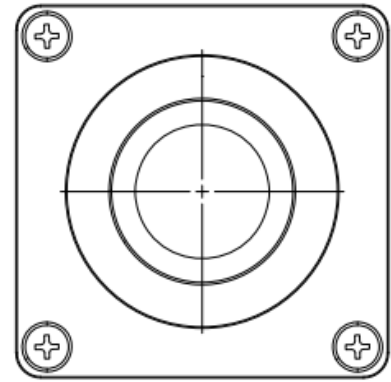
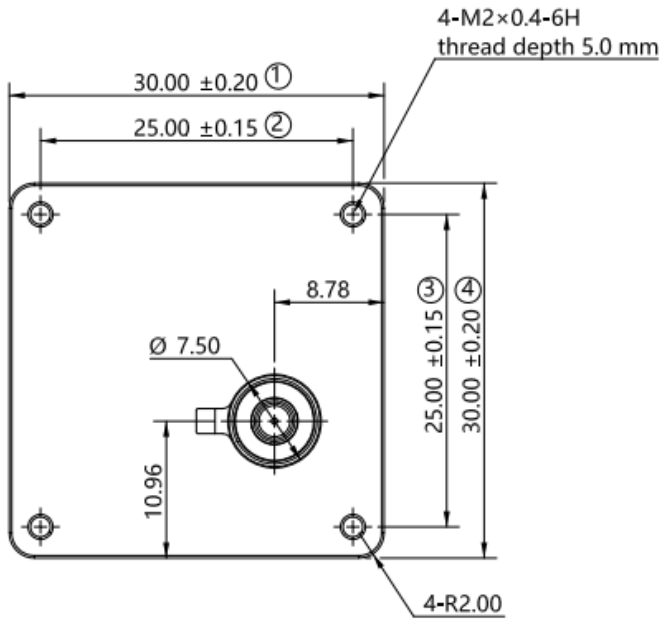


NOTE:

- \otimes marked are important sizes.
- Tolerances for others unmarked are ± 0.3 mm.

Unit: mm

DIMENSIONS: LI-AR0231-AP0202-TI913-200H



NOTE:

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

Unit: mm

ORDERING INFORMATION

NOTE:

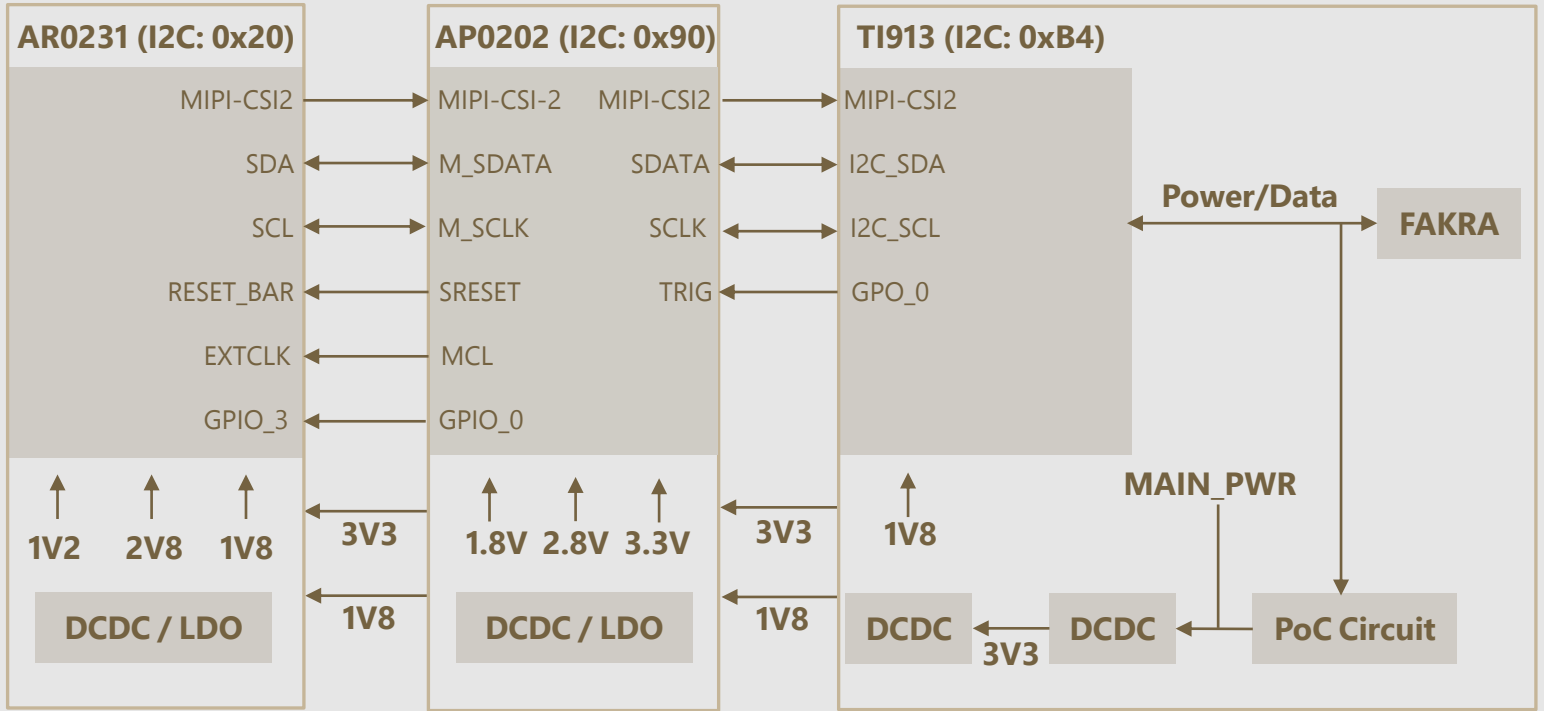
xxxH refers to 060H (FOV H 60°), 120H (FOV H 120°) or 200H (FOV H 200°)

LI-AR0231-AP0202-TI913-060H

Lens: M127B0618WR2
Lens EFL: 6.0 mm
Aperture, F/#: 1.8
Field of View (FOV): 74.5° (D) / 60.6° (H) / 36.1° (V)
Mount: M12
IP Rating: IP67

LI-AR0231-AP0202-TI913-120H	LI-AR0231-AP0202-TI913-200H
	
Lens: M128B02820WM12R1	Lens: E7393E-R8
Lens EFL: 2.8 mm	Lens EFL: 0.95 mm ± 5%
Aperture, F/#: 2.0	Aperture, F/#: 2.0 ± 5%
Field of View (FOV): 148° (D) / 122° (H) / 74° (V)	Field of View (FOV): 200° (H)
Mount: M12	Mount: M12
IP Rating: IP67	IP Rating: IP69K

PINOUT CONNECTIONS



USB3.0 CAMERA KIT

LI-TI914-USB-BOX



Front View



Side View

LI-AR0231-AP0202-TI913-xxxH can connect to LI-TI914-USB-BOX as a USB 3.0 camera.

Part#: **LI-USB30-AR0231-AP0202-TI913-xxxH**

KEY FEATURES

- USB 3.0 Super Speed support
- YUV output without compression
- Supports HDR
- Supports Trigger mode
- 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 1080 @ 20 fps
- Power consumption: Approx. 80 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers

BOM

#	Items	QTY
1	LI-AR0231-AP0202-TI913-xxxH	1
2	LI-TI914-USB-BOX	1
3	3-Meter Fakra Cable	1
4	12 VDC Power Supply	1
5	USB3.0 Cable	1



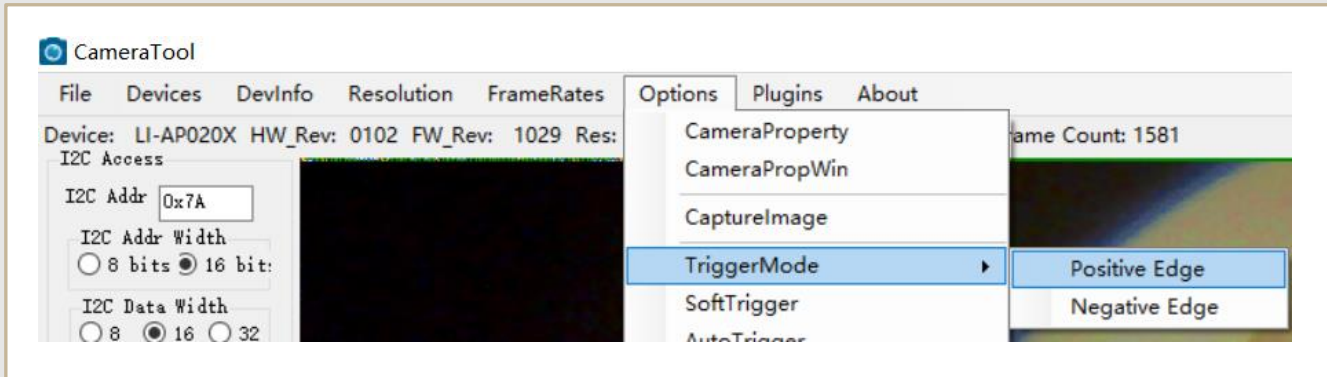
SDK SUPPORTED

- Camera Tool Source Code in C#
- Capture & Display
- 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.	19 Dec 2018
1.1	Added trigger mode.	30 Sep 2019
1.2	Changed 200H lens to E7393E-R8 and updated related product images and 2D dimensions.	02 Feb 2023

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