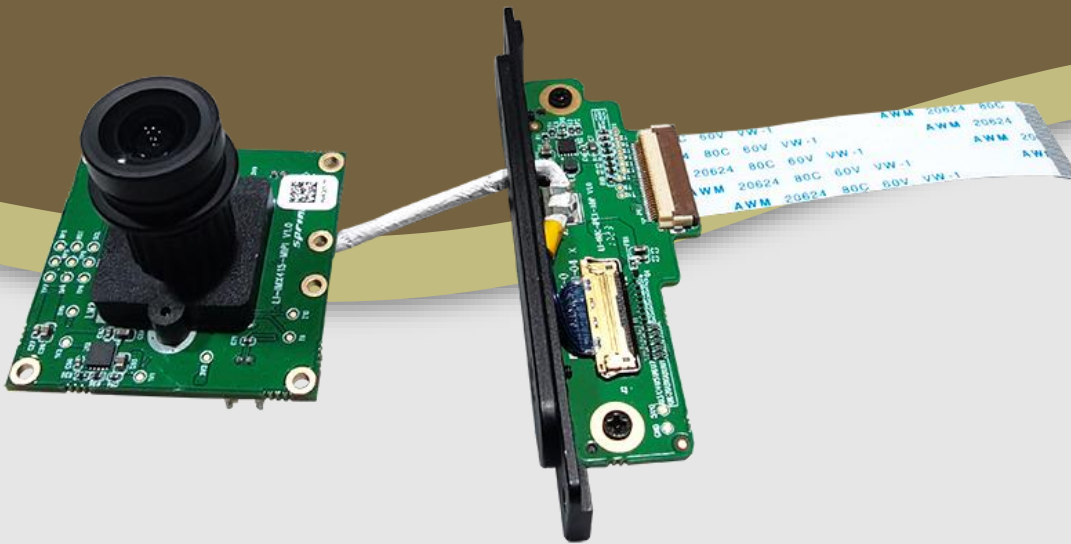




# LI-NUC-ADP-IMX415-MIPI-081H

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## KEY FEATURES

- Compatible with Intel® NUC system
- MIPI CSI-2 interface
- Adapter board: LI-NUC-IPEX-ADP
- Sensor: Sony Diagonal 6.43 mm (Type 1/2.8) CMOS Image Sensor IMX415
- Active pixels: 3864 (H) x 2176 (V)
- Power consumption (Intel NUC + LI-NUC-ADP-IMX415-MIPI-081H)

Full resolution @ 30 fps	165 mA @ 3.3 VDC
Standby	21 mA @ 3.3 VDC

- Color camera
- Length of the I-PEX cable: 300 mm
- Supports multiple length cables
- Connector Part# (sensor board): 20525-030E-02
- Allows customization
- Part#: **LI-NUC-ADP-IMX415-MIPI-081H**

## APPLICATIONS

- IoT
- Robots
- Camera on Laptop

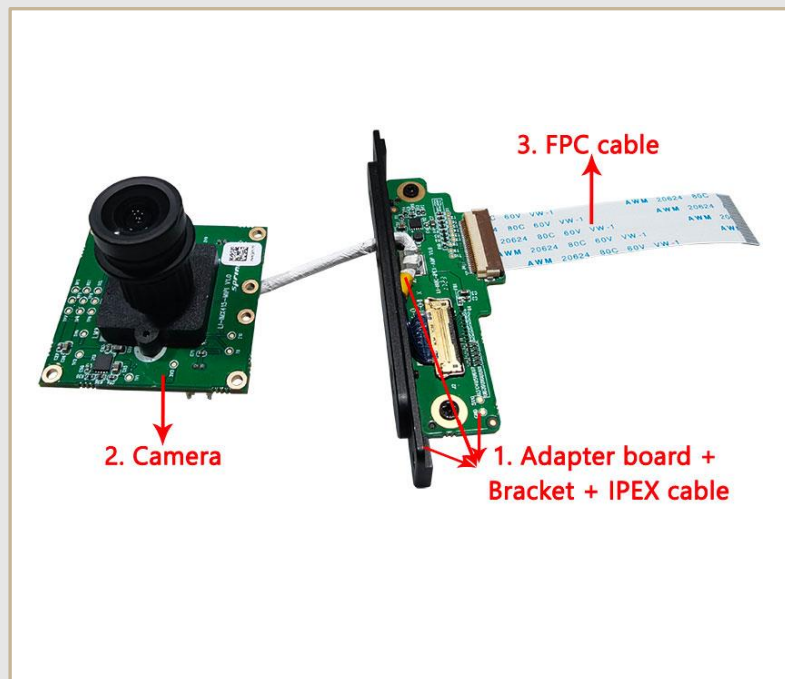
## BOM

**NOTE:** Intel® NUC system is **NOT** included.

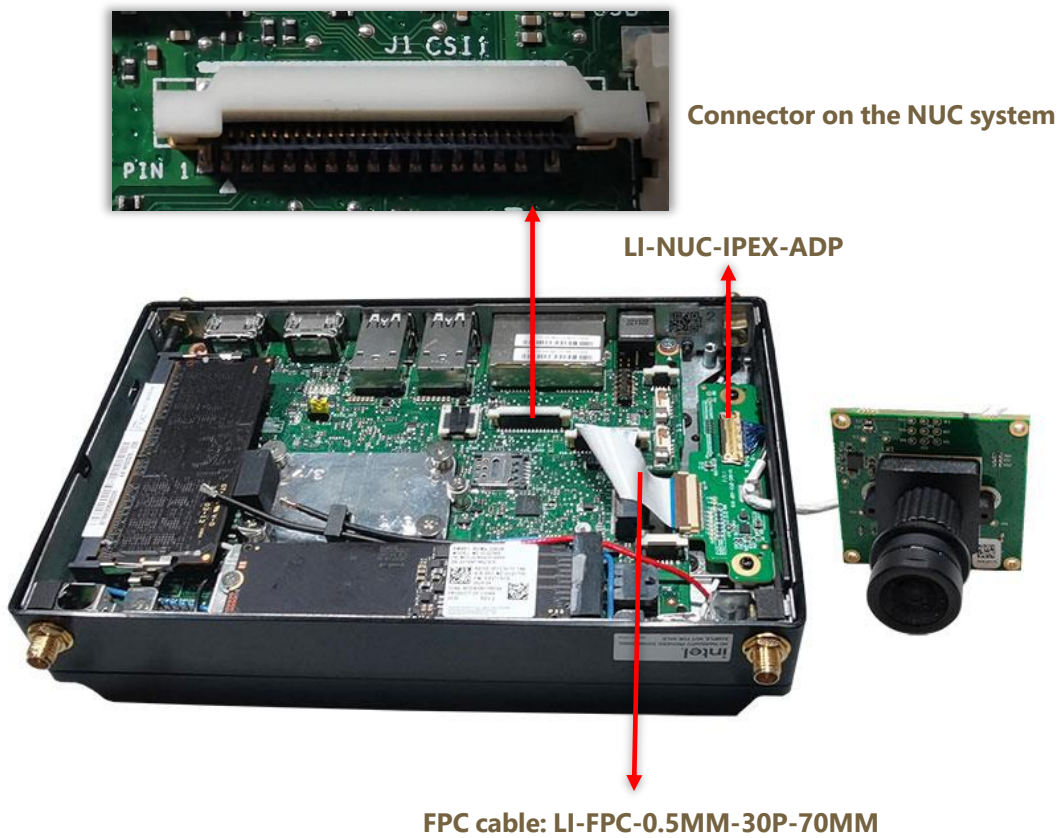
#	Items	Leopard P/N	QTY	Unit
1	Adapter board + Bracket + IPEX cable	LI-NUC-IPEX-ADP-B <b>NOTE:</b> Adapter P/N: LI-NUC-IPEX-ADP IPEX cable P/N: FAW-1233-03	1	Set
2	Camera	LI-IMX415-MIPI-081H	1	Piece
3	FPC Cable	LI-FPC-0.5MM-30P-70MM	1	Piece

## LENS SPECIFICATIONS

Effective Focal Length	4.063 mm
Aperture, F/#	2.29 ± 5%
Field of View (FOV)	81.7° horizontal
	44.7° vertical
	95.1° diagonal
Optical Distortion	-28.1%
TV Distortion	-9.3%
Relative Illumination	59.1%
IR Filter	650 nm IR cut filter
Lens Mount	M12 x 0.5



## CABLE CONNECTION (Deployment Inside)



### NOTE:

- Intel® NUC system is **NOT** included
- Connector on the Intel® NUC system to FPC cable: **J1 CSI1**
- Connector on the LI-NUC-IPEX-ADP to FPC cable: **FH12-30S-0.5SH (55)**
- Connector on the LI-NUC-IPEX-ADP to camera: **20525-030E-02**
- Either side of the FPC cable could be connected to the NUC system or the LI-NUC-IPEX-ADP
- While installing, please refer to the following:

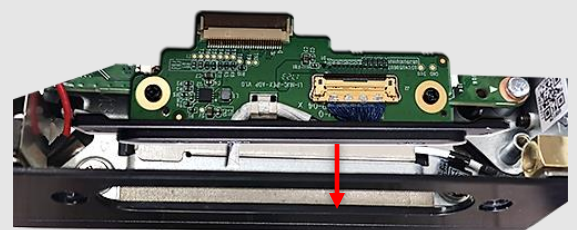


1. Uninstall original plate on the NUC.



2. Assemble the adapter board, bracket, IPEX cable and FPC cable together.

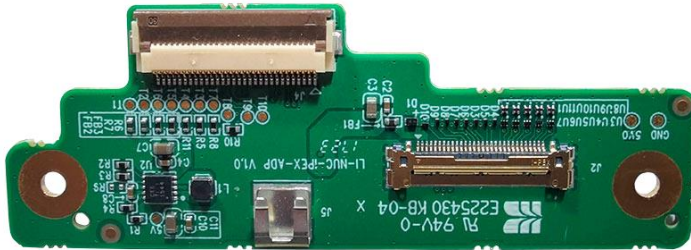
3. Install the assembled to the NUC. Then, connect the camera.



## CABLE CONNECTION (Viewing from Outside)



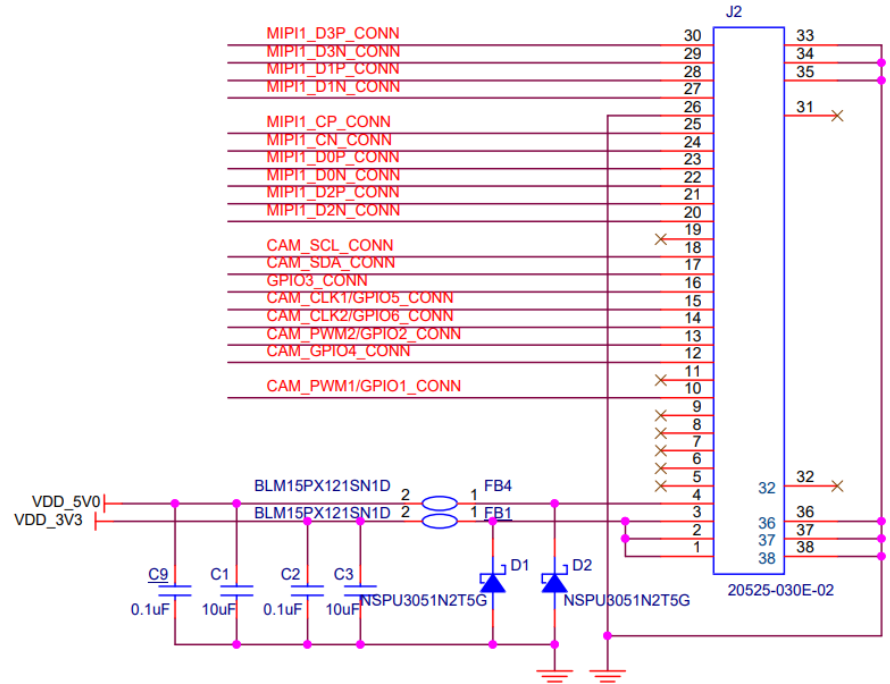
# LI-NUC-IPEX-ADP



## INTERFACES

### Interface J2 (To Camera)

- Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233-XX

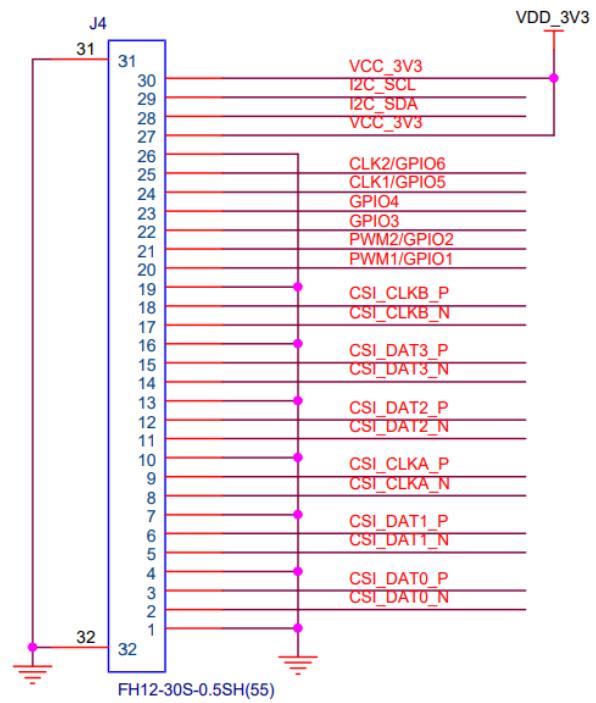


# LI-NUC-IPEX-ADP

## INTERFACES

### Interface J4 (To Intel® NUC System)

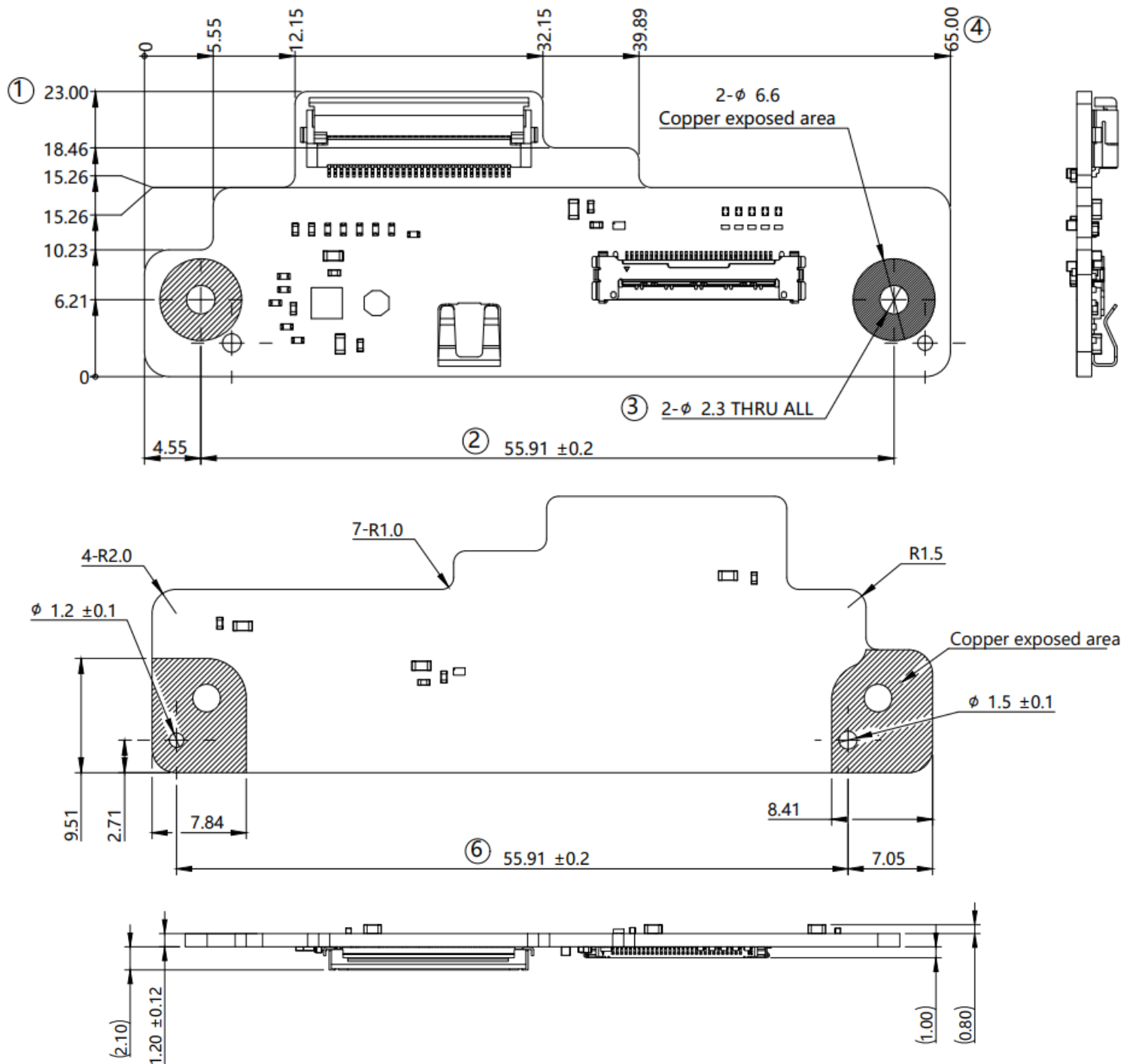
- Part#: FH12-30S-0.5SH (55)
- Number of Positions: 30
- Pitch: 0.5 mm
- Mating I-PEX Cable: FAW-1233-XX





# LI-NUC-IPEX-ADP

## DIMENSIONS



**NOTE:**

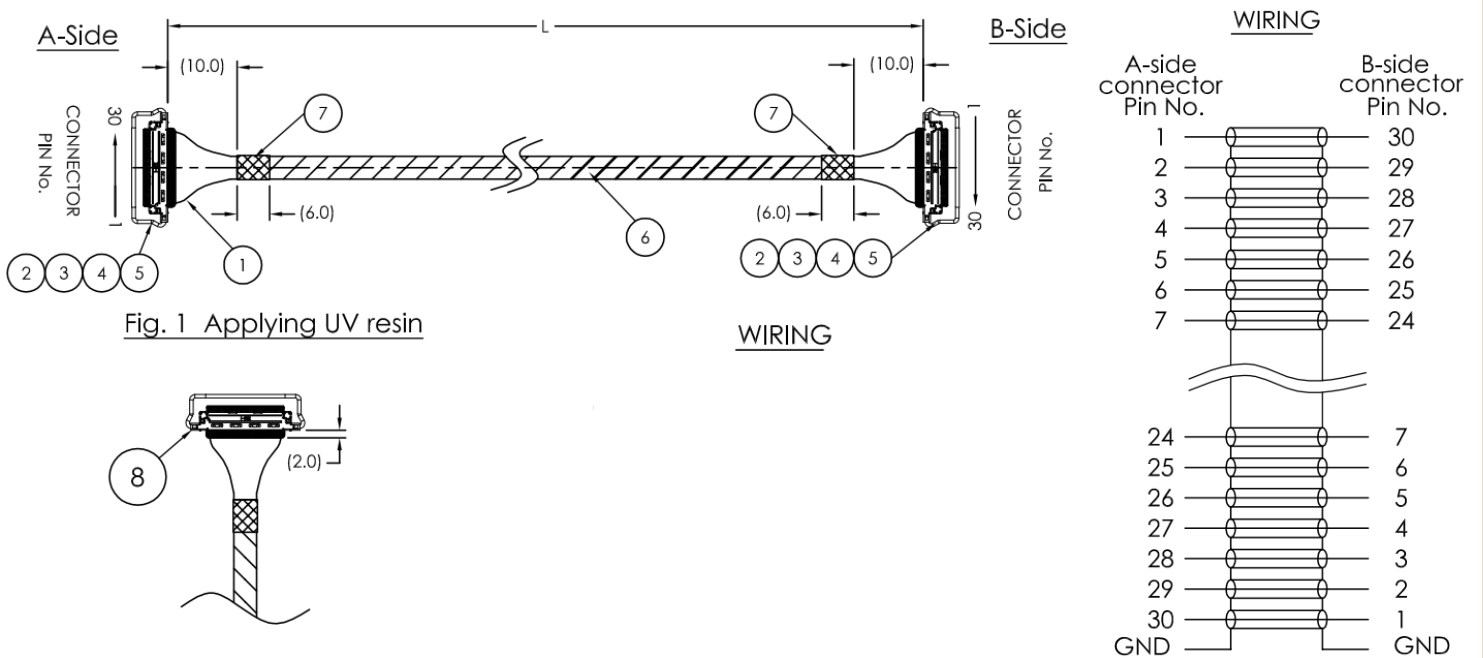
- ⊗ marked are important sizes.
- Tolerances for the unmarked are  $\pm 0.15$  mm.

Unit: mm

# FAW-1233-03 Cable



## MECHANICAL DIAGRAM



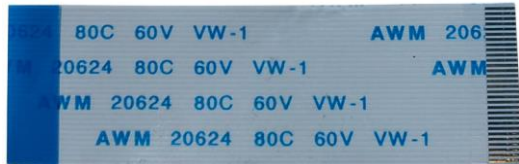
### NOTE:

- Total length:  $300.0 \pm 10.0$ .
- Apply UV resin at the end of connector to cover cables both sides of the cable assembly (Fig.1).

Unit: mm



## LI-FPC-0.5MM-30P-70MM



### FEATURES

- Pitch: 0.5 mm
- Number of pins: 30
- Width: 15  $\pm$  1 mm
- Length: 70 mm
- Bifacial: contacts are on different side
- Either side of the FPC cable could be connected to the Intel® NUC system or the LI-NUC-IPEX-ADP

## LI-IMX415-MIPI-081H



### CAMERA SPECIFICATIONS

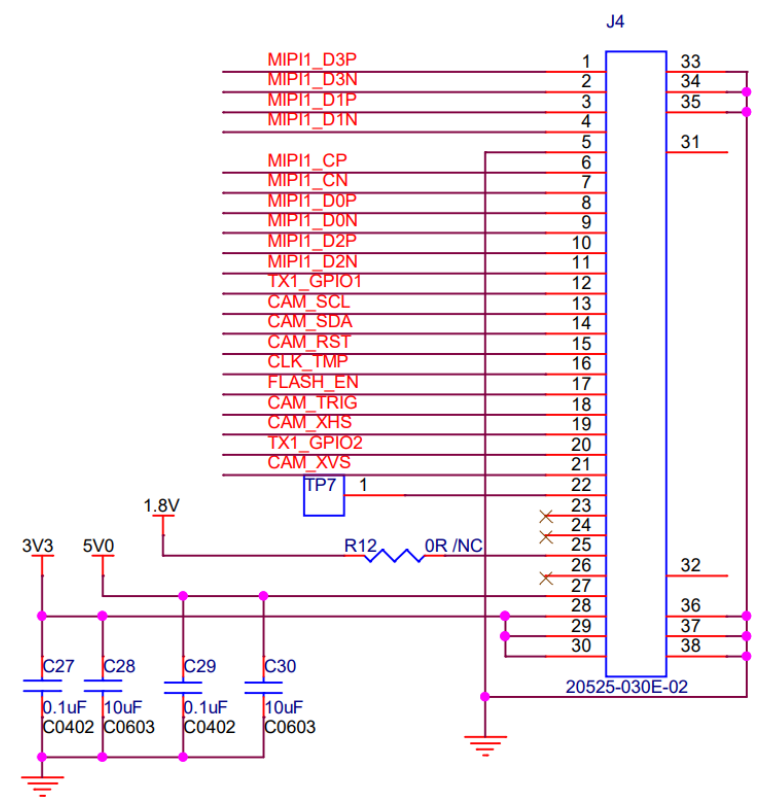
Sensor	Sony Diagonal 6.43 mm (Type 1/2.8) CMOS Image Sensor IMX415
Optical Format	1/2.8"
Resolution	3864 (H) x 2176 (V) (active pixels)
Pixel Size	1.45 x 1.45 $\mu\text{m}$
Output Format	10-bit / 12-bit RAW data
ISP	Not included
Color / Mono	Color sensor
Interface	4-lane MIPI CSI-2
Operating Temp	-20°C ~ +70°C
Storage Temp	-20°C ~ +70°C
Lens Mount	M12
Size	38 (L) x 38 (W) x 32.04 (D) mm
Weight	~ 17 g
Part#	LI-IMX415-MIPI-081H

# LI-IMX415-MIPI-081H

## INTERFACES

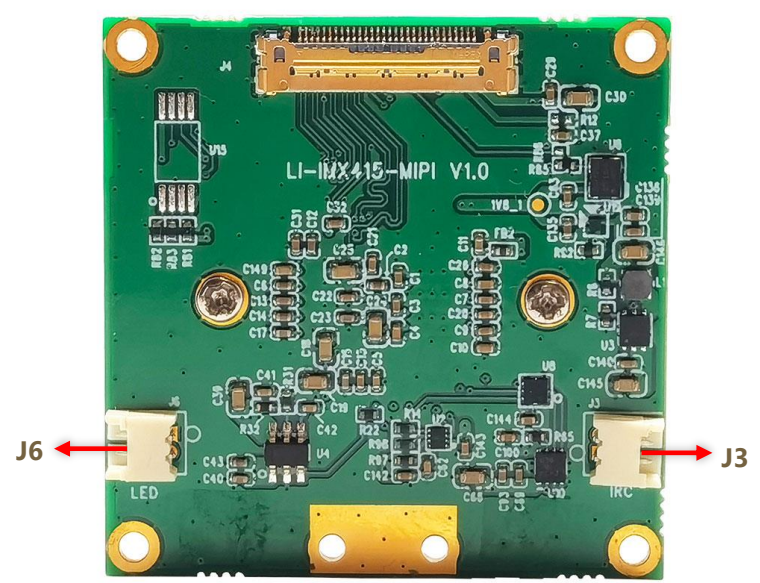
### Interface J4

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: LI-FAW-1233
- Sensor I2C Address: 0x1A (7-bit)
- External Power Supply: 3.3V
- 2.9V (analog), 1.8V and 1.1V are generated from board



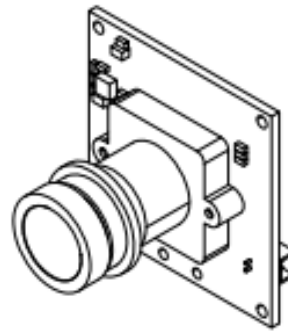
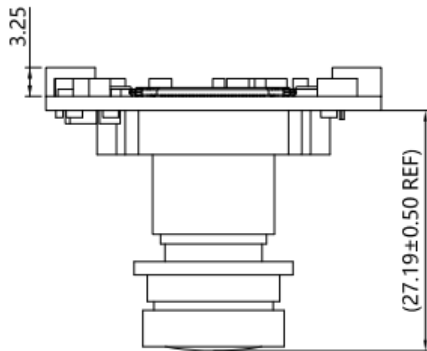
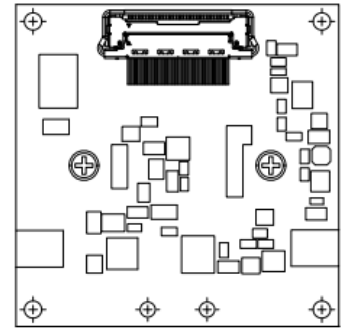
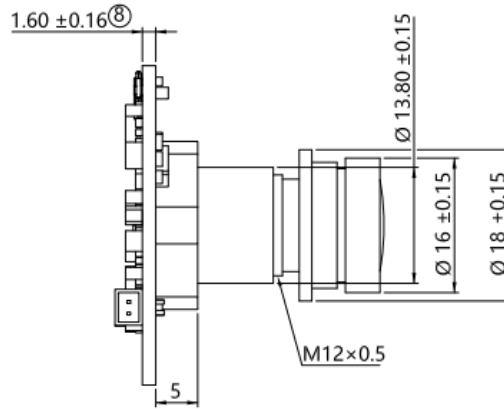
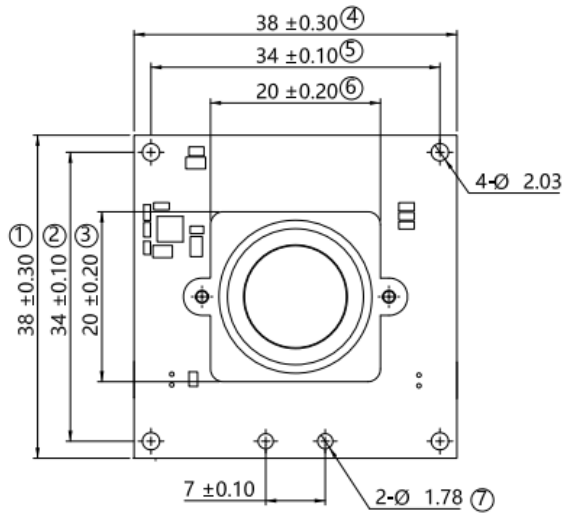
### Interface J3 & J6

Interfaces	Description
J3 for IR-Cut switcher	<ul style="list-style-type: none"> <li>■ Part#: 1734829-2</li> <li>■ Number of Positions: 2</li> <li>■ Pitch: 1.25 mm</li> </ul>
J6 for Flash_EN (Reserved IO)	<ul style="list-style-type: none"> <li>■ Part#: 1734829-2</li> <li>■ Number of Positions: 2</li> <li>■ Pitch: 1.25 mm</li> </ul>



# LI-IMX415-MIPI-081H

## DIMENSIONS



### NOTE:

- ⊗ marked are important sizes.
- Tolerances for the unmarked are  $\pm 0.3 \text{ mm}$ .

Unit: mm

## ● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	04 Jul 2023
1.1	Added power consumption in the "Key Features" part.	18 Jul 2023

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