



**LEOPARD**  
IMAGING

# LI-IMX477-MIPI-140H



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## INTRODUCTION

The LI-IMX477-MIPI-140H is a MIPI CSI-2 camera equipped with Sony diagonal 7.857 mm (Type 1/2.3) 12.3MP CMOS image sensor IMX477 which adopts Exmor RS™ technology to achieve high speed image capturing, high sensitivity and low noise image. This camera outputs 8-bit / 10-bit / 12-bit RAW data.

## SPECIFICATIONS

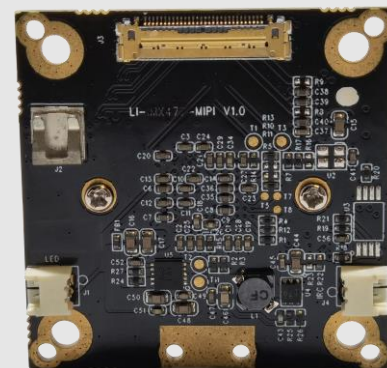
Sensor	Sony Diagonal 7.857 mm (Type 1/2.3) 12.3MP CMOS Image Sensor IMX477
Optical Format	1/2.3"
Resolution	4056 (H) x 3040 (V) (active pixels)
Pixel Size	1.55 x 1.55 $\mu\text{m}$
Output Format	8-bit / 10-bit / 12-bit RAW data
Maximum Frame Rate	60 fps @ 4056 x 3040
ISP	Not included
EEPROM	Included for calibration data
Color / Mono	Color sensor
Interface	4-lane MIPI CSI-2
Power Consumption	122 mA @ 3.3 VDC
Operating Temp	-20°C ~ +75°C
Storage Temp	-20°C ~ +75°C
Weight	~ 16 g
Part#	LI-IMX477-MIPI-140H

## APPLICATIONS

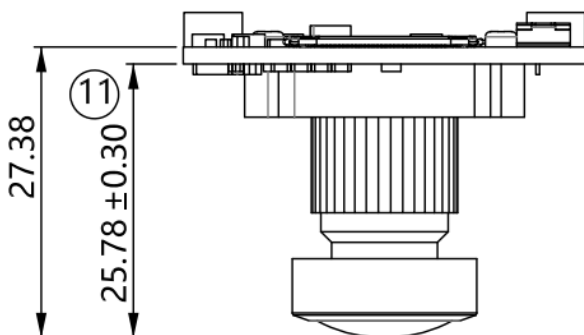
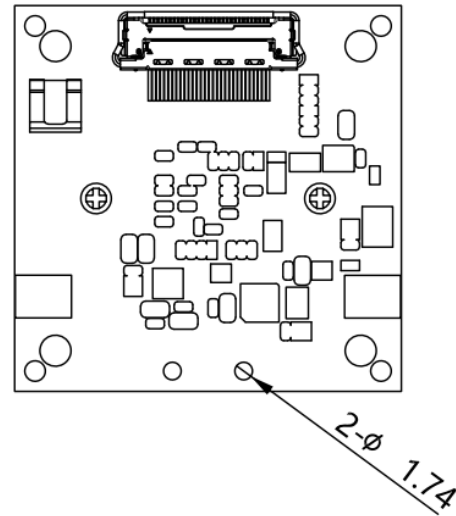
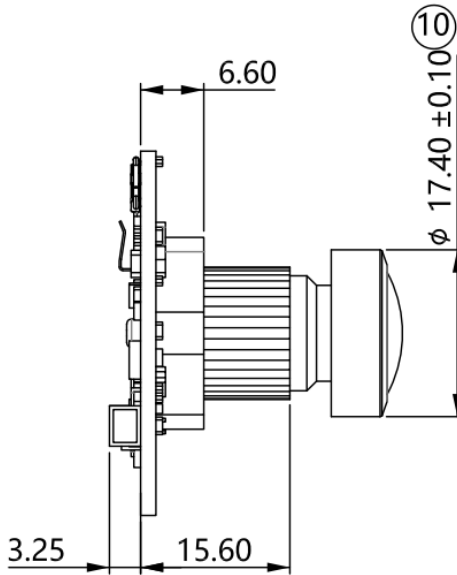
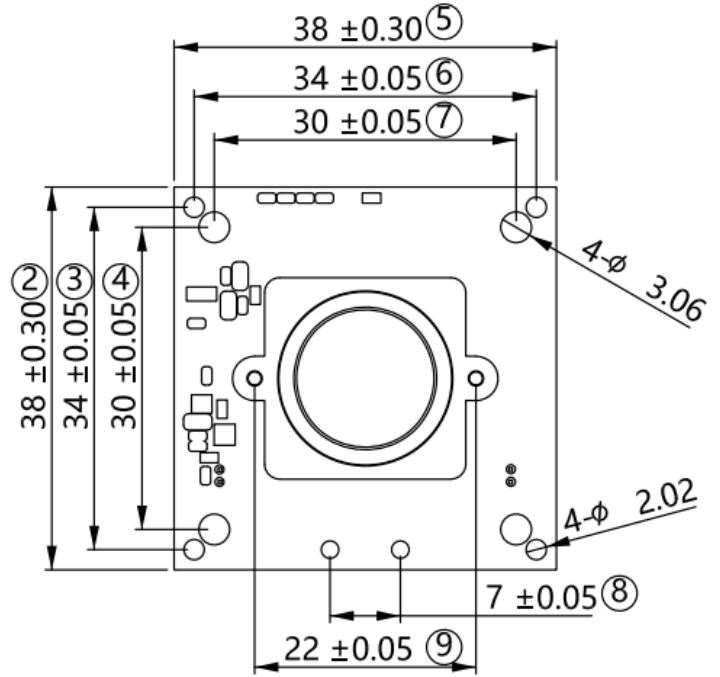
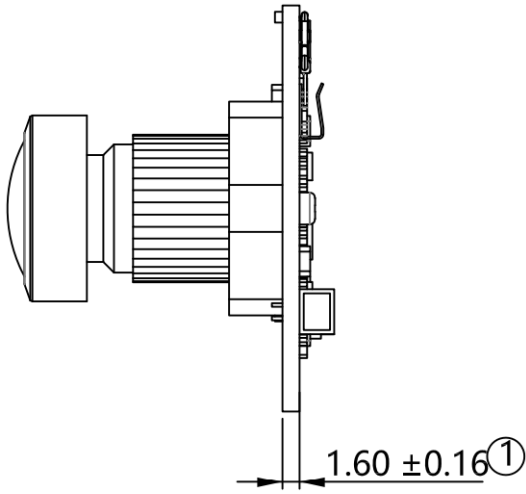
- IoT
- Drone
- Robots

## LENS SPECIFICATIONS

Focal Length	2.7 mm $\pm$ 5%
Focusing Distance	22.5 cm ~ 500 cm
Aperture, F/#	2.5 $\pm$ 5%
Field of View (FOV)	185° diagonal
	140° horizontal
	103° vertical
Optical Distortion	-75%
TV Distortion	-26%
Relative Illumination	63%
IR Filter	650 nm IR cut filter
Lens Mount	M12 x P0.5



# DIMENSIONS



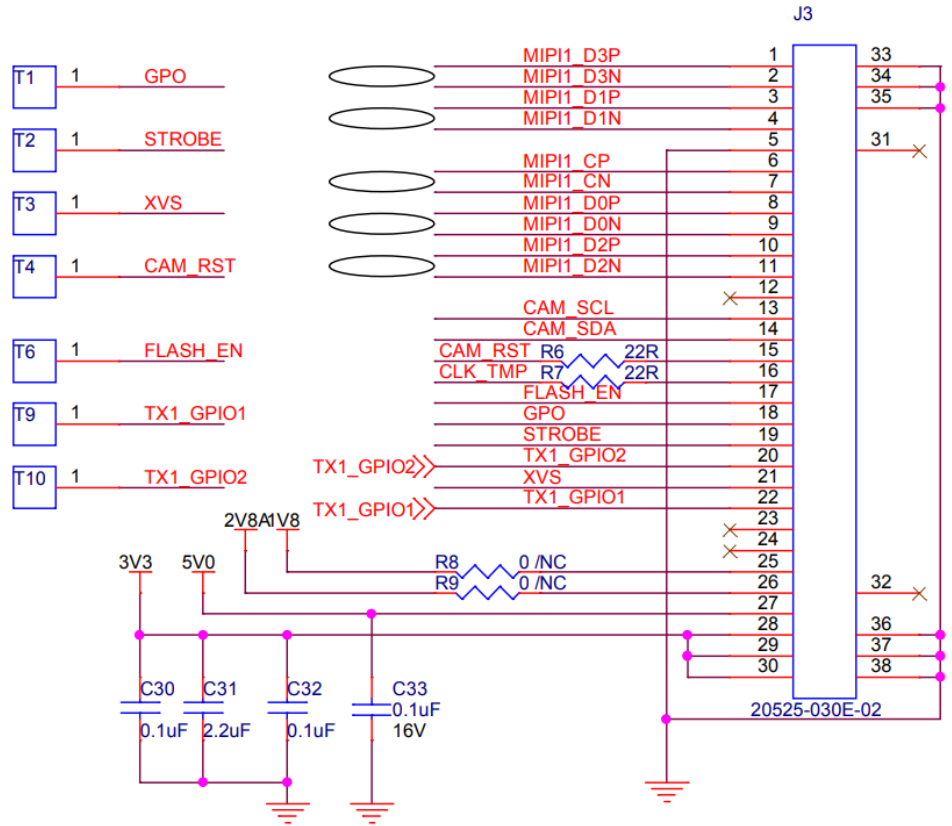
Note:

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

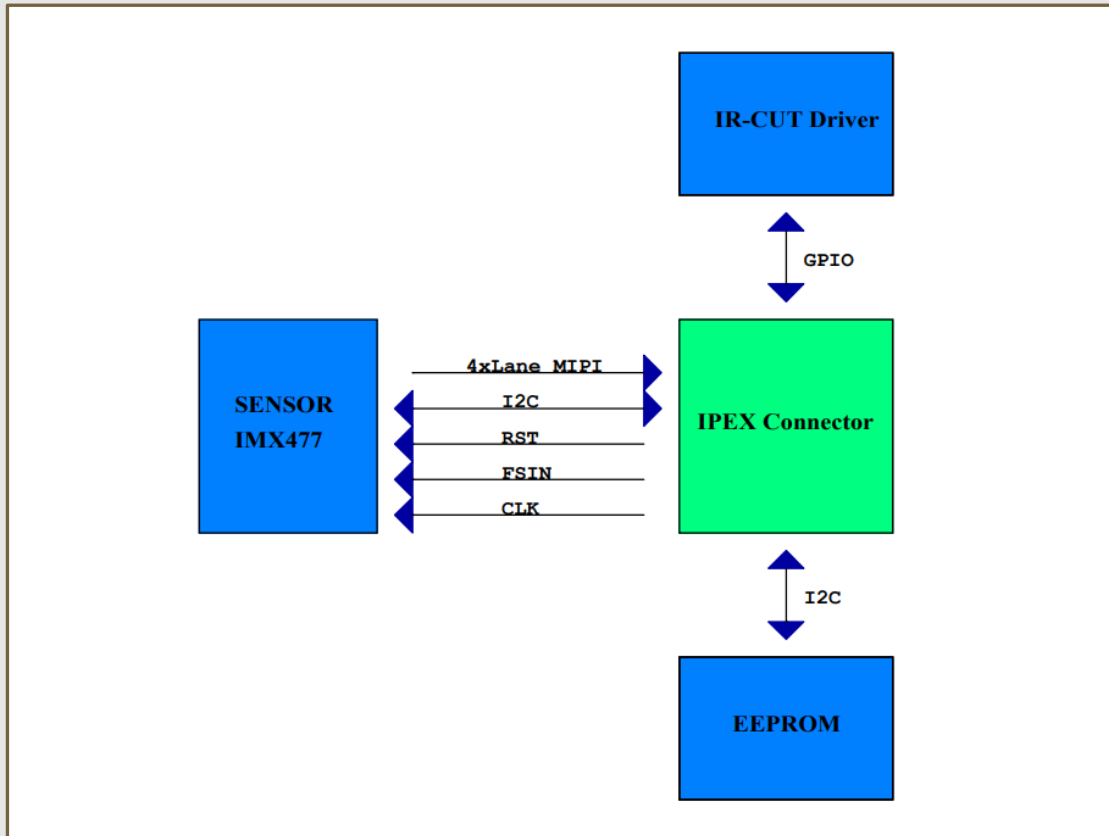
Unit: mm

# INTERFACE

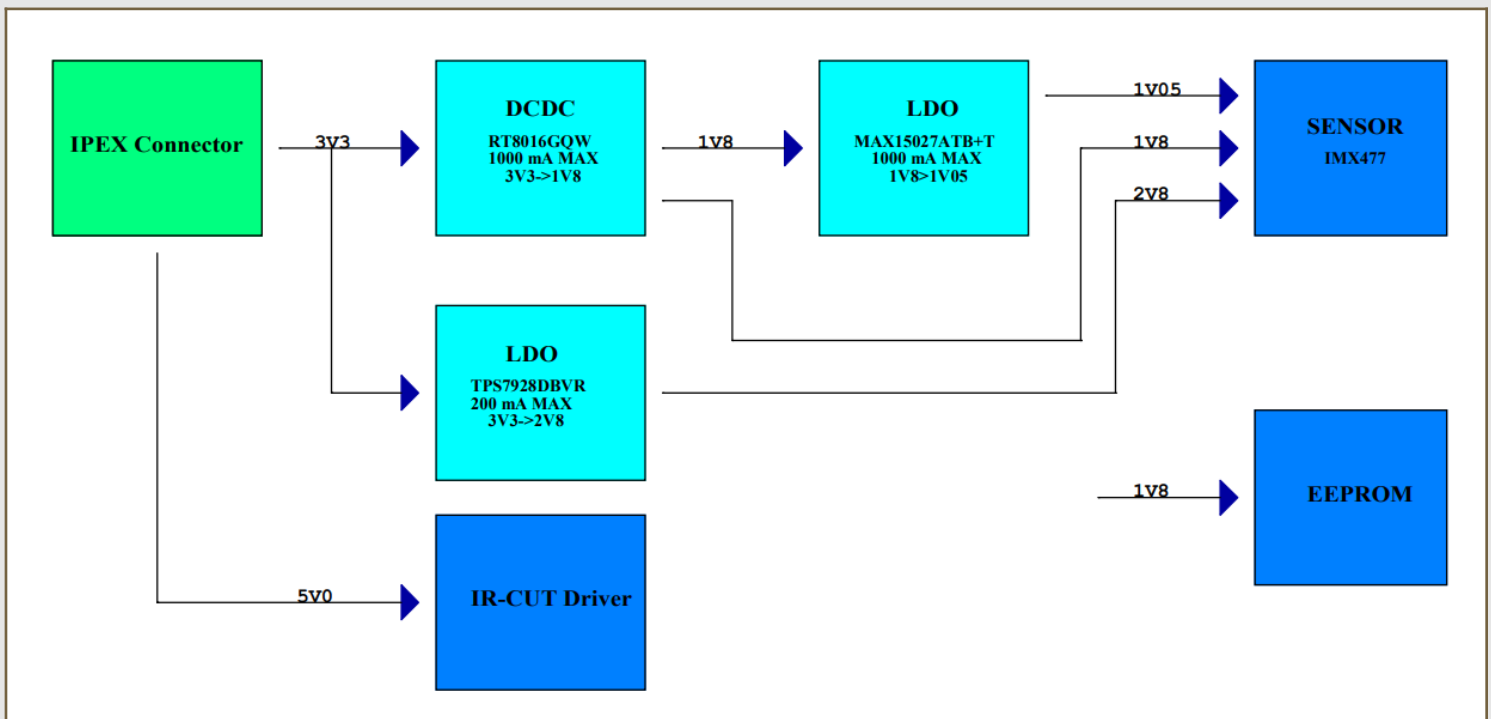
- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233
- Sensor I2C Address: 0x10 (7-bit)
- Sensor input clock needs to be supplied from pin 16.
- External Power Supply: 3.3V, 5.0V
- 2.8V, 1.8V, 1.05V are generated from board.
- 5.0V is not used since it's for IR cut switch function only.



## SYSTEM BLOCK DIAGRAM



## POWER BLOCK DIAGRAM



## ● REVISION HISTORY

Revision	Description	Release Date
1.0	First release.	14 Oct 2021
1.1	Updated temp information.	21 Oct 2021
1.2	Deleted info quoted from sensor spec.	27 May 2022

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