



**LEOPARD**  
IMAGING

# LI-IMX530C-MIPI-FKR-IPX-NL



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## INTRODUCTION

The LI-IMX530C-MIPI-FKR-IPX-NL is a global shutter camera featuring Sony's 24.55MP IMX530 CMOS image sensor with Pregius S technology. It comes without a lens and outputs 8/10/12-bit RAW data via a 4-lane MIPI CSI-2 interface, making it ideal for ITS and factory automation applications requiring high-resolution, distortion-free imaging of fast-moving objects.

## SPECIFICATIONS

Frame Rate	12-bit: 14.7 fps @ 5312 x 4608 (based on binary)
Sensor	Sony Diagonal 19.3 mm CMOS Image Sensor IMX530
Optical Format	1.2"
Resolution	5328 (H) x 4608 (V) (active pixels)
Pixel Size	2.74 x 2.74 $\mu\text{m}$
Shutter Type	Global shutter
Output Format	8-bit / 10-bit / 12-bit RAW data
Color / Mono	Color
FPGA	Included, mainly for signal conversion from LVDS to MIPI
Interface	4-lane MIPI CSI-2
Lens	Not included
Lens Mount	C-mount
Power Consumption	TBD
Operating Temp	-30 °C ~ +75 °C
Storage Temp	-30 °C ~ +75 °C
Weight	~45 g

## APPLICATIONS

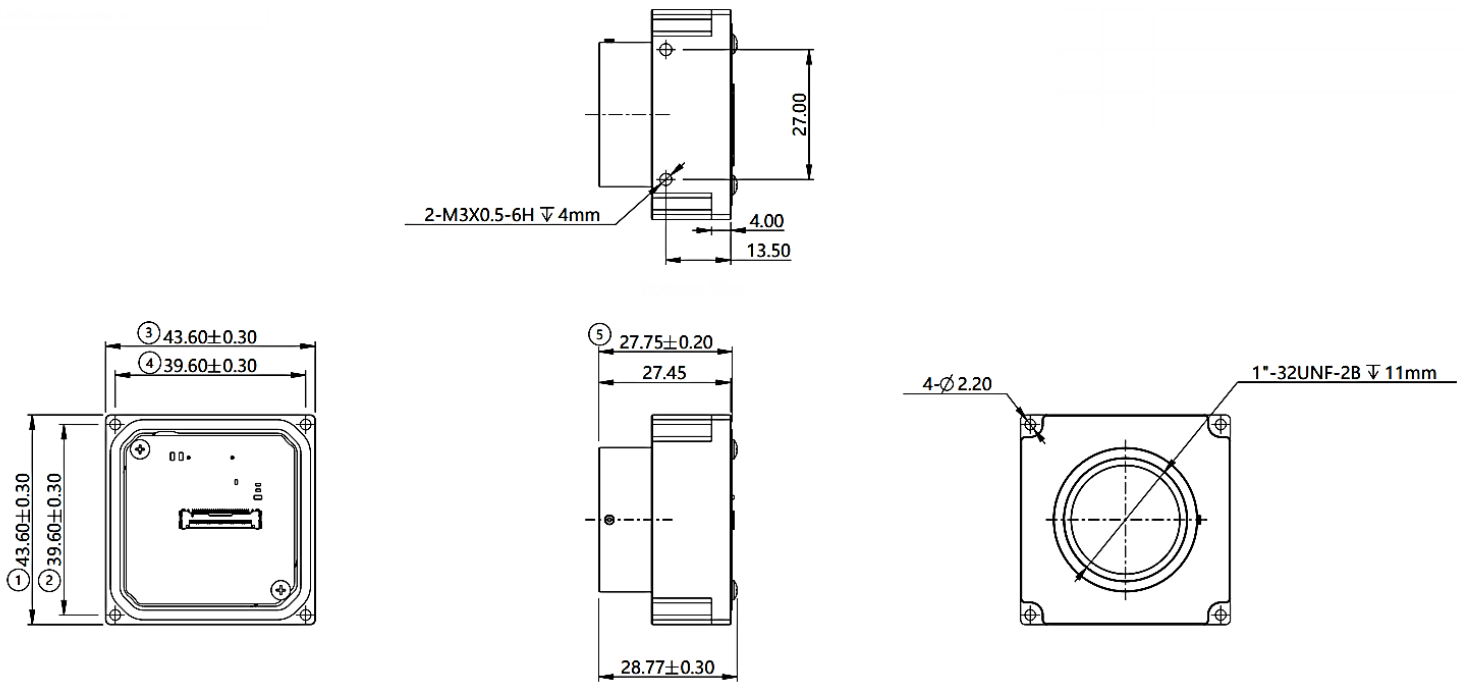
- ITS Cameras
- FA Cameras



### **NOTE:**

Lens is not included in LI-IMX530C-MIPI-FKR-IPX-NL.

## DIMENSIONS (Without Lens)

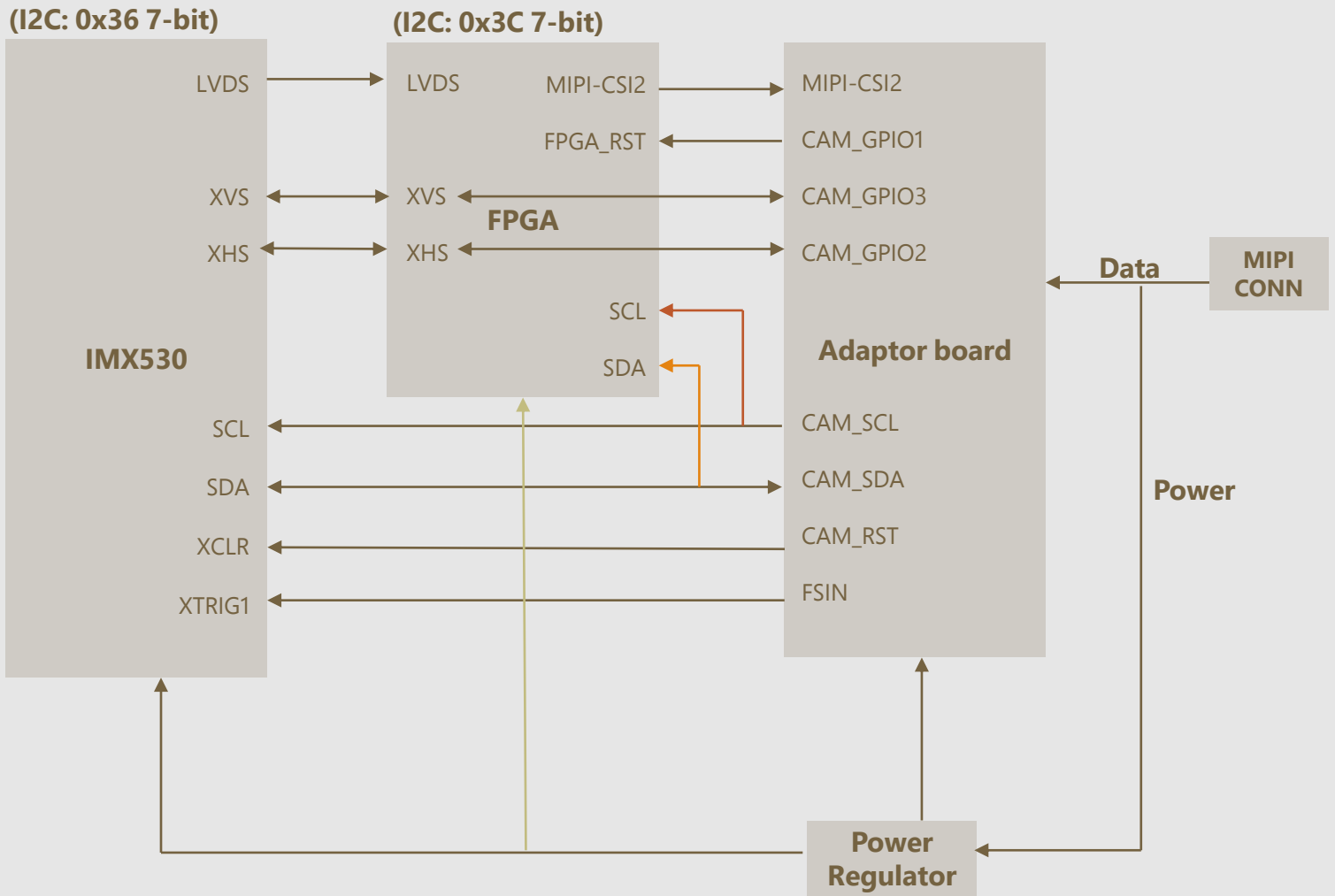


### NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked – refer to the Tolerance table.
- All materials are compliant with RoHS requirements.
- Unit: mm

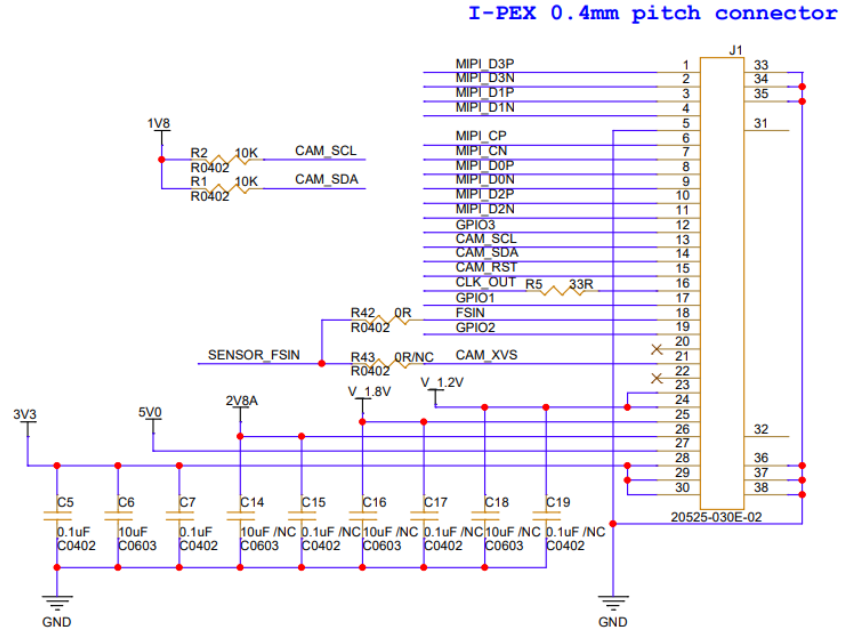
TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5 < X ≤ 3	±0.1	0.5 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30'
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20'
30 < X ≤ 120	±0.3	X > 30	±2	120 < X ≤ 400	±10'
120 < X ≤ 400	±0.5			X > 400	±5'
400 < X ≤ 1000	±0.8				
X > 1000	±1.2				

# SYSTEM BLOCK DIAGRAM



## INTERFACE J1

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233-03
- Sensor I2C Address: 0X36 (7-bit)
- External Power Supply: 3.3V



## PINOUT DETAILS OF J1

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MIPI_D3P	OUTPUT	MIPI Clock Data3 Differential Pair +	1.8V
2	MIPI_D3N	OUTPUT	MIPI Clock Data3 Differential Pair -	1.8V
3	MIPI_D1P	OUTPUT	MIPI Clock Data1 Differential Pair +	1.8V
4	MIPI_D1N	OUTPUT	MIPI Clock Data1 Differential Pair -	1.8V
5	GND	POWER	Ground signal for digital and analog	-
6	MIPI_CP	OUTPUT	MIPI Clock Lane Differential Pair +	1.8V
7	MIPI_CN	OUTPUT	MIPI Clock Lane Differential Pair -	1.8V
8	MIPI_D0P	OUTPUT	MIPI Clock Data0 Differential Pair +	1.8V
9	MIPI_D0N	OUTPUT	MIPI Clock Data0 Differential Pair -	1.8V
10	MIPI_D2P	OUTPUT	MIPI Clock Data2 Differential Pair +	1.8V
11	MIPI_D2N	OUTPUT	MIPI Clock Data2 Differential Pair -	1.8V
12	CAM_GPIO3	I/O	Vertical sync signal	1.8V
13	CAM_SCL	INPUT	1.8V IO Camera I2C SCL signal with 3.2kΩ pull-up.	1.8V

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	CAM_SDA	I/O	1.8V IO Camera I2C SDA signal with 3.2k $\Omega$ pull-up.	1.8V
15	CAM_RST	INPUT	1.8V IO Camera reset signal (Active Low)	1.8V
16	CLK_OUT	INPUT	Reserved CLK for camera	1.8V
17	CAM_GPIO1	INPUT	FPGA Reset signal	1.8V
18	FSIN	INPUT	Trigger input 1	1.8V
19	CAM_GPIO2	I/O	Horizontal sync signal	1.8V
20	-	-	-	-
21	CAM_XVS	I/O	Vertical sync signal (Reserved)	1.8V
22	-	-	-	-
23	V_1.2V	POWER	Not Used	-
24	V_1.2V	POWER	Not Used	-
25	V_1.8V	POWER	Not Used	-
26	2V8A	POWER	Not Used	-
27	5V0	POWER	Not Used	-
28	3V3	POWER	3.3V power supply	3.3V
29	3V3	POWER	3.3V power supply	3.3V
30	3V3	POWER	3.3V power supply	3.3V

## ● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	14 Jul 2025
0.2	Deleted the mono camera info.	23 Jul 2025
0.3	<ol style="list-style-type: none"><li>1. Updated pictures on the page 1 &amp; 2.</li><li>2. Updated Operating Temp &amp; Storage Temp.</li></ol>	28 May 2026

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