



LEOPARD
IMAGING

LI-IMX536-MIPI-092H



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INTRODUCTION

The LI-IMX536-MIPI-092H is an advanced, intelligent camera module integrating the Sony Pregius S CMOS color sensor IMX536 with a powerful Field-Programmable Gate Array (FPGA) processing unit. It is designed for latency-sensitive applications such as robotic vision, high-speed industrial inspection, and custom embedded systems.

SPECIFICATIONS

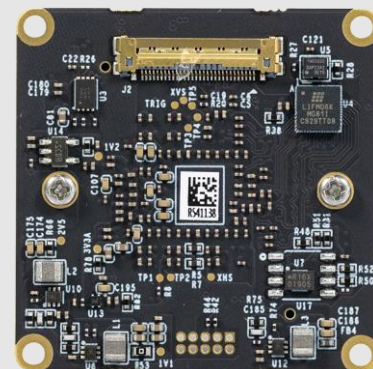
Frame Rate	20 fps @ 2838 × 2916 (Based on binary)
Sensor	Sony IMX536 (Pregius S, Global Shutter)
Optical Format	Type 2/3
Resolution	2838 (H) x 2916 (V) (Based on binary)
Pixel Size	2.74 x 2.74 μm
Shutter	Global shutter
Output Format	8-bit / 10-bit / 12-bit RAW
FPGA	Included
Color / Mono	Color
Interface	4-lane MIPI CSI-2
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~34 g

APPLICATIONS

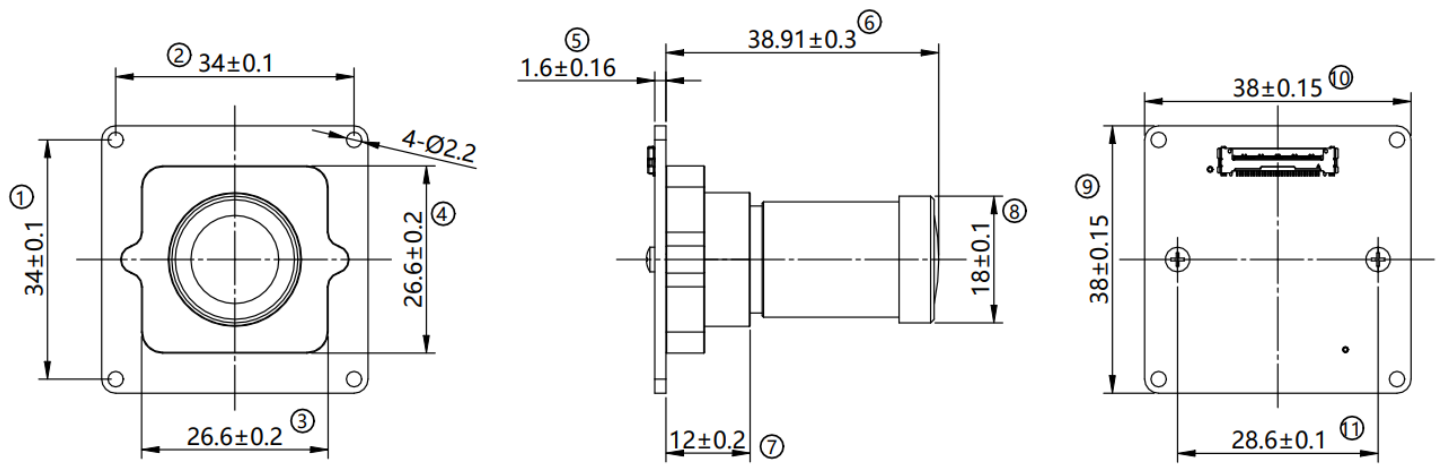
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LENS SPECIFICATIONS

Focal Length	5.17 \pm 5% mm
Aperture, F/#	1.6 \pm 5%
Field of View (FOV)	92° horizontal
IR Filter	650nm IR CUT Filter
Lens Mount	M16 x P0.5



DIMENSIONS



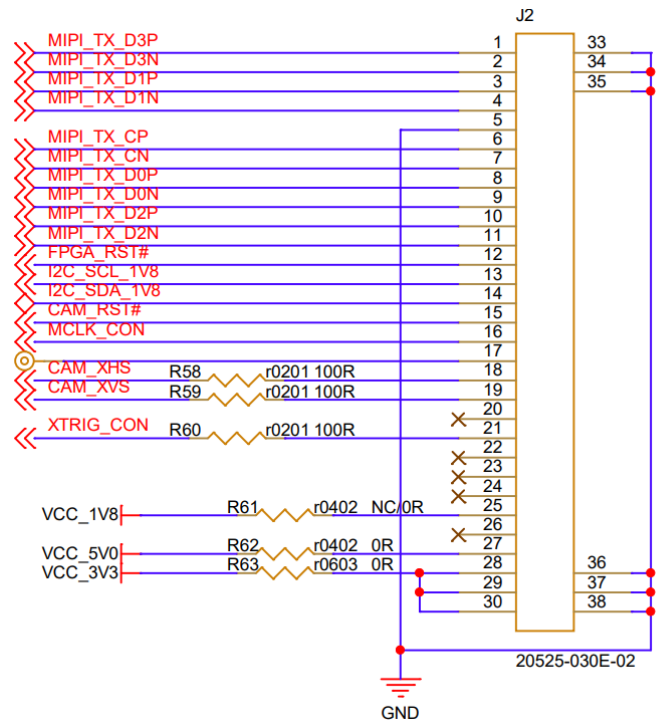
NOTE:

- ⊗ marked are important sizes.
- Tolerances for the 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
$0.5 < X \leq 3$	± 0.1	$0.5 < X \leq 3$	± 0.2	$X \leq 10$	$\pm 1'$
$3 < X \leq 6$	± 0.1	$3 < X \leq 6$	± 0.5	$10 < X \leq 50$	$\pm 30'$
$6 < X \leq 30$	± 0.2	$6 < X \leq 30$	± 1	$50 < X \leq 120$	$\pm 20'$
$30 < X \leq 120$	± 0.3	$X > 30$	± 2	$120 < X \leq 400$	$\pm 10'$
$120 < X \leq 400$	± 0.5			$X > 400$	$\pm 5'$
$400 < X \leq 1000$	± 0.8				
$X > 1000$	± 1.2				

MIPI INTERFACE

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX cable: LI-FAW-1233
- Sensor I2C Address: 0x6C (8-bit)
- External Power Supply: 3.3V , 5V



PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MIPI1_D3P	OUTPUT	MIPI Data Lane 3 Differential Pair +	MIPI DPHY
2	MIPI1_D3N	OUTPUT	MIPI Data Lane 3 Differential Pair -	MIPI DPHY
3	MIPI1_D1P	OUTPUT	MIPI Data Lane 1 Differential Pair +	MIPI DPHY
4	MIPI1_D1N	OUTPUT	MIPI Data Lane 1 Differential Pair -	MIPI DPHY
5	GND	POWER	Ground signal for digital and analog	-
6	MIPI_CP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
7	MIPI_CN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
8	MIPI_D0P	OUTPUT	MIPI Data0 Differential Pair +	MIPI DPHY
9	MIPI_D0N	OUTPUT	MIPI Data0 Differential Pair -	MIPI DPHY
10	MIPI1_D2P	OUTPUT	MIPI Data Lane 2 Differential Pair +	MIPI DPHY
11	MIPI1_D2N	OUTPUT	MIPI Data Lane 2 Differential Pair -	MIPI DPHY
12	FPGA_RST	INPUT	1.8V FPGA reset signal (Pulled up to 1.8V with 4.7kΩ on board)	1.8V
13	SCL	INPUT	1.8V IO Camera I2C SCL signal (Pulled up to 1.8V with 1kΩ on board)	1.8V

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	SDA	I/O	1.8V IO Camera I2C SDA signal (Pulled up to 1.8V with 1kΩ on board)	1.8V
15	CAM_RST	INPUT	1.8V IO camera reset signal (Active Low) (Pulled up to 1.8V with 10kΩ on board)	1.8V
16	MCLK_CON	INPUT	Reserved CLK for camera (Provided from host side)	1.8V
17	TP	-	Test Point	-
18	CAM_XHS	I/O	Horizontal sync signal	1.8V
19	CAM_XVS	I/O	Vertical sync signal	1.8V
20	NC	-	-	-
21	XTRIG_CON	INPUT	External trigger	1.8V
22	NC	-	-	-
23	NC	-	-	-
24	NC	-	-	-
25	VCC_1V8	INPUT	Reserved 1.8V power supply for camera (Provided from host side)	1.8V
26	NC	-	-	-
27	VCC_5V0	POWER	5V power supply (Provided from host side)	5V
28	VCC_3V3	POWER	3.3V power supply (Provided from host side)	3.3V
29	VCC_3V3	POWER	3.3V power supply (Provided from host side)	3.3V
30	VCC_3V3	POWER	3.3V power supply (Provided from host side)	3.3V

● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	09 May 2026
0.2	<ol style="list-style-type: none">1. Updated pictures on the page 1 & 2.2. Updated Frame Rate and Resolution.	28 May 2026

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