



LEOPARD
IMAGING

LI-IMX908-MIPI-140H



Address:

910 Auburn Ct
Fremont, CA 94538
USA



Phone:

+1 (408)263-0988

Fax:

+1 (408)217-1960



Sales:

sales@leopardimaging.com

Support:

support@leopardimaging.com

INTRODUCTION

The LI-IMX908-MIPI-140H camera module features Sony STARVIS 3™ 8.4MP sensor with 1.45 μm LOFIC pixels. It delivers 4K HDR video and captures clear details in high-contrast and low-light scenes. It comes with a 4-lane MIPI CSI-2 interface and a 140° FOV lens, making it ideal for security, surveillance, and intelligent transportation systems.

SPECIFICATIONS

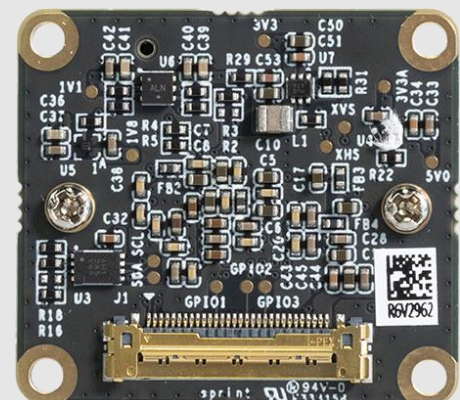
Maximum Frame Rate	90 fps @ 3840 × 2160
Output Format	10-bit / 12-bit RAW data
EEPROM Memory Size	128 Kbit
Sensor	Sony Diagonal 6.42 mm STARVIS 3™ Sensor IMX908
Optical Format	1/2.8"
Resolution	3856 (H) × 2176 (V) (active pixels)
Pixel Size	1.45 μm × 1.45 μm
Color / Mono	Color
Interface	4-lane MIPI CSI-2
Power Consumption	~0.8 W (7.9 fps @ 3840 × 2160)
Operating Temp	TBD
Storage Temp	TBD
Weight	~14 g

APPLICATIONS

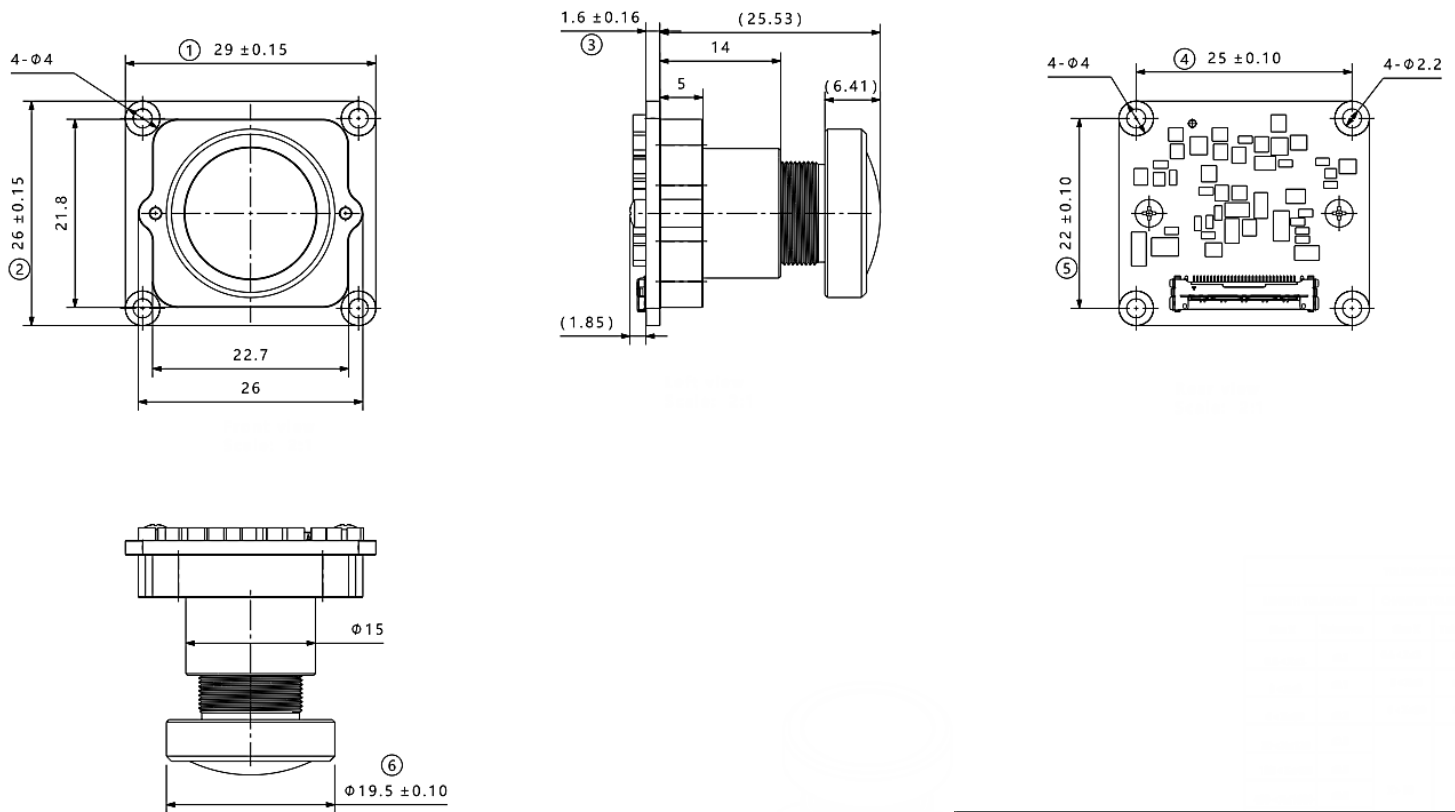
- Security
- Surveillance
- Intelligent transportation systems

LENS SPECIFICATIONS

Focal Length	2.3 mm
Aperture, F/#	2.3
Field of View (FOV)	140° horizontal
F-theta Distortion	< -9%
IR Filter	650 nm IR cut Filter
Lens Mount	M12 x P0.5



DIMENSIONS



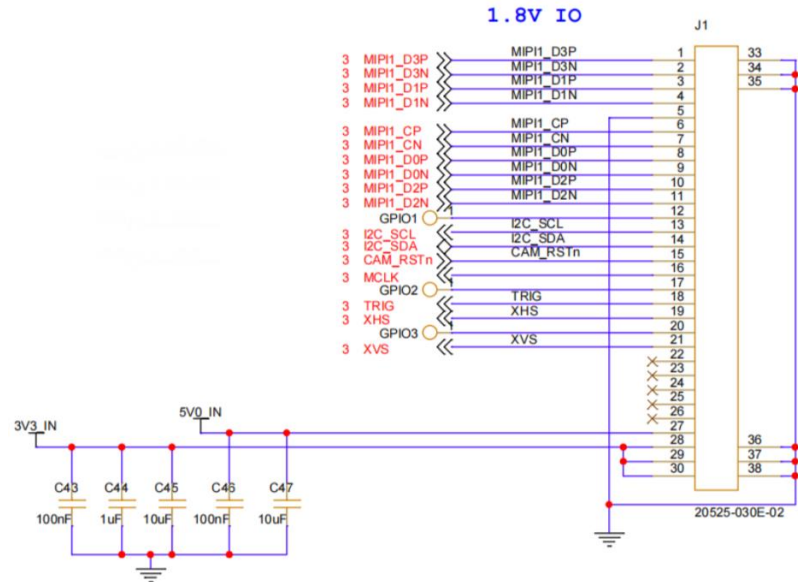
NOTE:

- ⊗ 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	$X \leq 10$	$\pm 1^\circ$
$3 < X \leq 6$	± 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: 0x34 (8-bit)
- EEPROM I2C Address: 0xA8 (8-bit)
- External Power Supply: 5V, 3.3V



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	MIPI1_CP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
7	MIPI1_CN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
8	MIPI1_D0P	OUTPUT	MIPI Data0 Differential Pair +	MIPI DPHY
9	MIPI1_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	GPIO1	I/O	General-Purpose Input/Output 1 (Reserved)	1.8V
13	CAM_SCL	INPUT	1.8V IO Camera I2C SCL signal (without pull- up resistor on board)	1.8V

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	CAM_SDA	I/O	1.8V IO Camera I2C SDA signal (Without pull-up resistor on board)	1.8V
15	CAM_RST_N	INPUT	1.8V IO camera reset signal (Active Low) (Pulled up to 1.8V with 10kΩ on board)	1.8V
16	MCLK	INPUT	Reserved CLK for camera (Provided from host side)	1.8V
17	GPIO2	I/O	General-Purpose Input/Output 2 (reserved)	1.8V
18	XTRIG	INPUT	1.8V IO trigger signal for sensor	1.8V
19	XHS	I/O	1.8V horizontal sync signal for sensor	1.8V
20	GPIO3	I/O	General-Purpose Input/Output 3 (reserved)	1.8V
21	XVS	I/O	1.8V vertical sync signal for sensor	1.8V
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	5V0_IN	POWER	5V power supply (Must be provided from host side)	5V
28	VCC_3V3	POWER	3.3V power supply (Must be provided from host side)	3.3V
29	VCC_3V3	POWER	3.3V power supply (Must be provided from host side)	3.3V
30	VCC_3V3	POWER	3.3V power supply (Must be provided from host side)	3.3V

• REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	30 Jun 2026
0.2	1. Updated pictures on the page 1 &2. 2. Updated power consumption.	18 Aug 2026

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