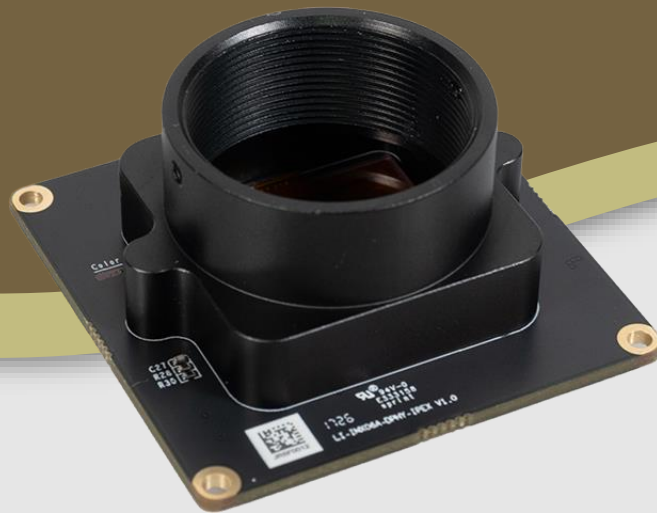




LEOPARD
IMAGING

LI-IMX06A-DPHY-NL



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INTRODUCTION

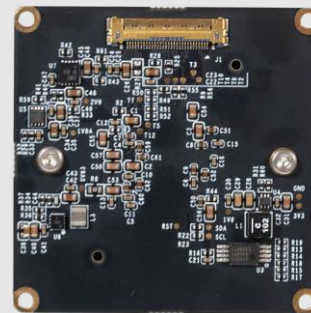
The LI-IMX06A-DPHY-NL is a high-resolution MIPI D-PHY camera module built around Sony's 50.3-megapixel stacked CMOS image sensor IMX06A. Leveraging the widely adopted D-PHY interface, it delivers proven reliability and broad host compatibility. Designed for demanding imaging applications in mobile and embedded vision systems, it strikes an excellent balance between image quality, power efficiency, and bandwidth.

SPECIFICATIONS

Maximum Frame Rate	Full Resolution: 8192 x 6144 (50.3MP) @ up to 15 fps
	4x2 Pixel Binning (16:9): up to 120 fps
Output Format	10-bit / 12-bit / 14-bit raw
Sensor	Diagonal 16.384 mm (Type 1/0.98) 50.3Mega-Pixel CMOS Image Sensor IMX06A
Optical Format	1/0.98"
Pixel Size	1.6 μm $\times$ 1.6 μm
Color / Mono	Color
Resolution	8192 (H) $\times$ 6144 (V) (active pixels)
HDR (High Dynamic Range)	Supported
Interface	4-Lane MIPI D-PHY
Operating Temp	TBD
Storage Temp	TBD
Power Consumption	TBD
Lens	No included
Lens Mount	C-Mount
Weight	~23 g

APPLICATIONS

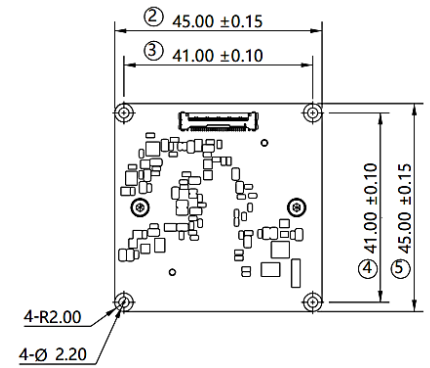
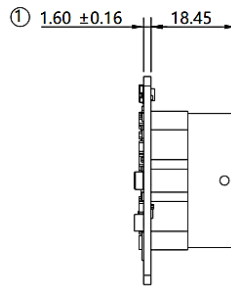
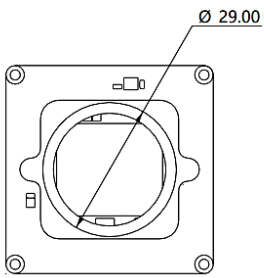
- Cellular phone
- Tablet PC



NOTE:

Lens is not included in LI-IMX06A-DPHY-NL.

DIMENSIONS



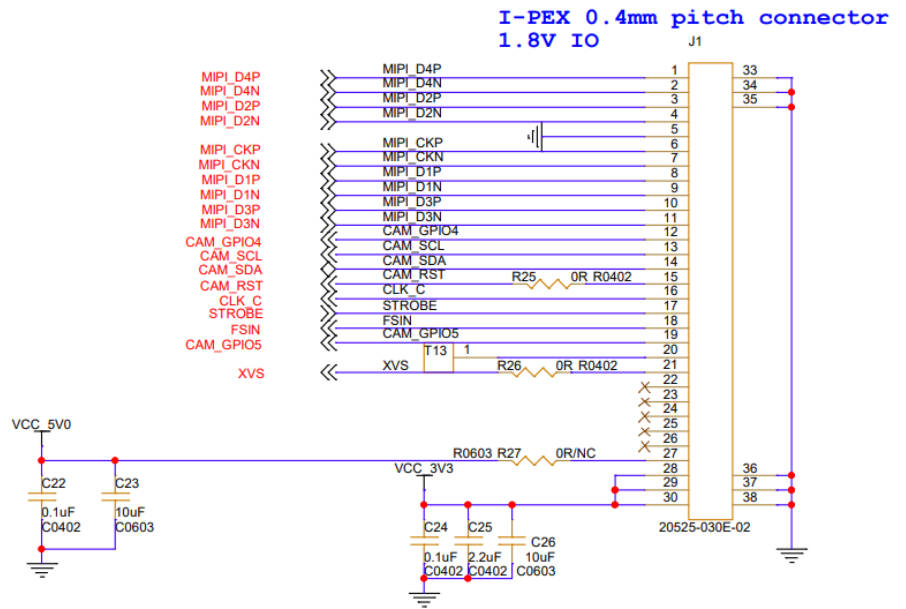
NOTE:

- ⊗ marked are important sizes.
- Tolerances for others unmarked refer to the tolerance table.
- 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				

MIPI INTERFACE

- Connector Part#: 20525-030E-02
- Number of Positions: 30
- Pitch: 0.4 mm
- Mating I-PEX Cable: FAW-1233-03
- Sensor I2C Address: 0X1A (7-bit)
- External Power Supply: 3.3V



PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MIPI_D4P	OUTPUT	MIPI signal(D-PHY)	0.83V
2	MIPI_D4N	OUTPUT	MIPI signal(D-PHY)	0.83V
3	MIPI_D2P	OUTPUT	MIPI signal(D-PHY)	0.83V
4	MIPI_D2N	OUTPUT	MIPI signal(D-PHY)	0.83V
5	GND	-	GND	0V
6	MIPI_CP	OUTPUT	MIPI signal(D-PHY_CLOCK)	0.83V
7	MIPI_CN	OUTPUT	MIPI signal(D-PHY_CLOCK)	0.83V
8	MIPI_D1P	OUTPUT	MIPI signal(D-PHY)	0.83V
9	MIPI_D1N	OUTPUT	MIPI signal(D-PHY)	0.83V
10	MIPI_D3P	OUTPUT	MIPI signal(D-PHY)	0.83V
11	MIPI_D3N	OUTPUT	MIPI signal(D-PHY)	0.83V
12	CAM_GPIO4	OUTPUT	Digital output	1.8V
13	CAM_SCL	INPUT	1.8V IO Camera I2C SCL signal with 4.7kΩ pull-up 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 with 4.7k Ω pull-up on board-	1.8V
15	CAM_RST	INPUT	Reset(Chip clear) with 4.7k Ω pull-up on board.	1.8V
16	CLK_C	INPUT	Reserved CLK for camera (Provided from host side)	1.8V
17	STROBE	OUTPUT	Digital output	1.8V
18	FSIN	I/O	General purpose I/O (Function is not supported)	1.8V
19	CAM_GPIO5	OUTPUT	Digital output	1.8V
20	T13	-	Pre-reserved test point	-
21	XVS	I/O	Digital I/O (Function is not supported)	1.8V
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	VCC_5V0	POWER	Reserved 5V power supply (Provided from host side)	5V
28	3V3	POWER	3.3V Power supply (Provided from host side)	3.3V
29	3V3	POWER	3.3V Power supply (Provided from host side)	3.3V
30	3V3	POWER	3.3V Power supply (Provided from host side)	3.3V

● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	07 Jul 2026

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