



LEOPARD
IMAGING

LI-IMX06A-CPHY-NL



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

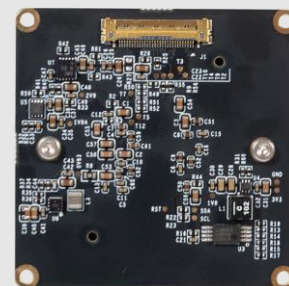
The LI-IMX06A-CPHY-NL is a high-resolution MIPI C-PHY camera module built around Sony's 50.3-megapixel stacked CMOS image sensor IMX06A. Designed for demanding imaging applications, particularly in mobile and embedded vision systems, it strikes an excellent balance between image quality, power efficiency, and bandwidth.

SPECIFICATIONS

Maximum Frame Rate	Full Resolution: 8192 x 6144 (50.3MP) @ up to 30 fps
	4x2 Pixel Binning (16:9): up to 210 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	2/3 trio C-PHY, up to 6 Gbps/trio,
Operating Temp	TBD
Storage Temp	TBD
Power Consumption	TBD
Lens	No included
Lens Mount	C-Mount
Weight	~23 g

- Cellular phone
- Tablet PC

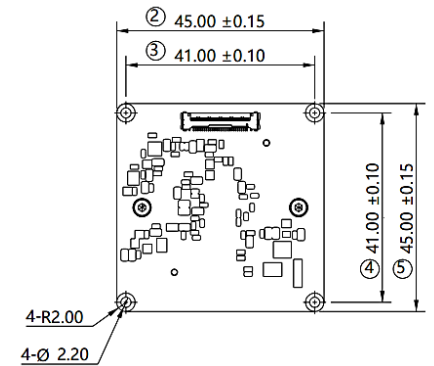
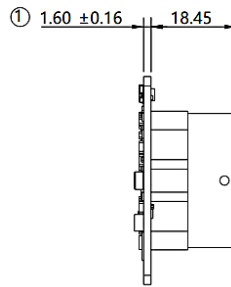
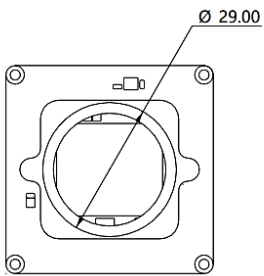
APPLICATIONS



NOTE:

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

DIMENSIONS



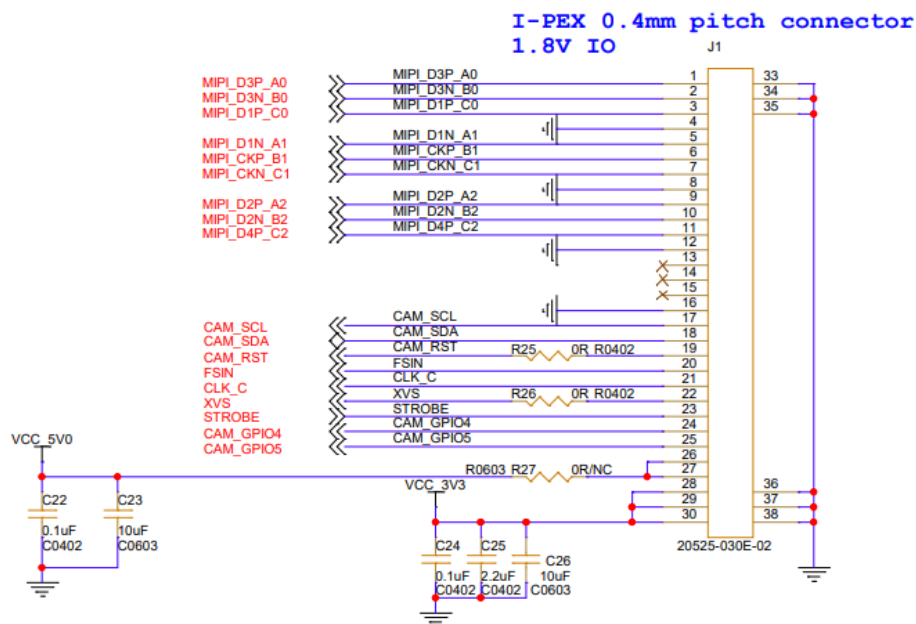
NOTE:

- ⊗ 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_D3P_A0	OUTPUT	MIPI signal(C-PHY)	0.83V
2	MIPI_D3N_B0	OUTPUT	MIPI signal(C-PHY)	0.83V
3	MIPI_D1P_C0	OUTPUT	MIPI signal(C-PHY)	0.83V
4	GND	-	-	GND
5	MIPI_D1N_A1	POWER	MIPI signal(C-PHY)	0.83V
6	MIPI_CKP_B1	OUTPUT	MIPI signal(C-PHY)	0.83V
7	MIPI_CKN_C1	OUTPUT	MIPI signal(C-PHY)	0.83V
8	GND	-	-	GND
9	MIPI_D2P_A2	OUTPUT	MIPI signal(C-PHY)	0.83V
10	MIPI_D2N_B2	OUTPUT	MIPI signal(C-PHY)	0.83V
11	MIPI_D4P_C2	OUTPUT	MIPI signal(C-PHY)	0.83V
12	GND	-	-	GND
13	-	-	-	-

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	-	-	-	-
15	-	-	-	-
16	GND	-	-	GND
17	CAM_SCL	OUTPUT	1.8V IO Camera I2C SCL signal with 4.7k Ω pull-up on board.	1.8V
18	CAM_SDA	I/O	1.8V IO Camera I2C SDA signal with 4.7k Ω pull-up on board.	1.8V
19	CAM_RST	INPUT	Reset(Chip clear) with 4.7k Ω pull-up on board.	1.8V
20	FSIN	I/O	General purpose I/O(Function is not supported)	1.8V
21	CLK_C	I/O	Reserved CLK for camera (Provided from host side)	1.8V
22	XVS	INPUT	Digital I/O(Function is not supported)	1.8V
23	STROBE	OUTPUT	Digital output	1.8V
24	CAM_GPIO4	I/O	Digital output	1.8V
25	CAM_GPIO5	I/O	Digital output	1.8V
26	VCC_5V0	POWER	Reserved 5V power supply (Provided from host side)	5V-
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

910 Auburn Ct, Fremont, CA 94538, USA
Phone: +1-408-263-0988
Fax: +1-408-217-1960
Email: sales@leopardimaging.com
Website: www.leopardimaging.com

