



**LEOPARD**  
IMAGING

# LI-IMX424-FPDLINKIV-xxxH



**Address:**

910 Auburn Ct  
Fremont, CA 94538  
USA



**Phone:**

+1 (408)263-0988

**Fax:**

+1 (408)217-1960



**Sales:**

[sales@leopardimaging.com](mailto:sales@leopardimaging.com)

**Support:**

[support@leopardimaging.com](mailto:support@leopardimaging.com)

## INTRODUCTION

The LI-IMX424-FPDLINKIV-xxxH is equipped with Sony Diagonal 9.69 mm (Type 1/1.7) CMOS solid-state RCCB image sensor IMX424 and FPD-Link IV serializer TI971. This camera outputs RAW data.

## SPECIFICATIONS

Sensor	Sony Diagonal 9.69 mm (Type 1/1.7) CMOS Solid-State RCCB sensor IMX424
Optical Format	1/1.7"
Resolution	3849 (H) x 1929 (V) (active pixels)
Pixel Size	2.25 x 2.25 $\mu\text{m}$
Sensor	Color sensor
Output Format	12-bit / 14-bit / 16-bit RAW data
Maximum Frame Rate	40 fps @ 3840 x 1920
HDR (High Dynamic Range)	Supported
Lens	FOV H 40° / 65° / 120°
Serializer	TI971 FPD-Link IV (DS90UB971-Q1)
Power Supply Range	9 ~ 19 VDC
Connector	FAKRA Z TYPE
IP Rating	040H / 065H: IP67 120H: TBD
Power Consumption	113 mA @ 12 VDC (3840 x 1928 @ 15 fps)
Operating Temp	-40°C ~ +85°C
Storage Temp	-40°C ~ +85°C
Weight	~ 45 g
Part#	LI-IMX424-FPDLINKIV-xxxH

## APPLICATIONS

- High Performance ADAS
- Autonomous Driving

## IMAGING ORIENTATION



## CABLE CONNECTOR

- Housing Connector: FAKRA Z Type
- Cable Length: 3 meters
- Cable Part#: FAK-SMZSMZ-3M



LI-IMX424-FPDLINKIV-040H

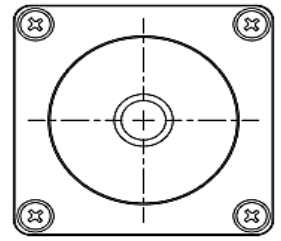
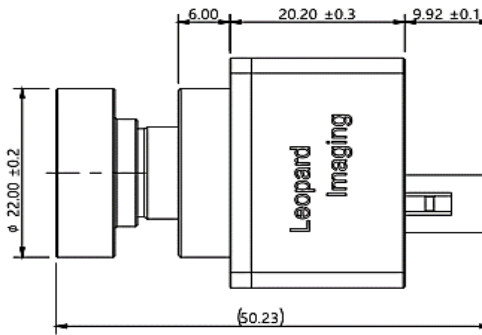
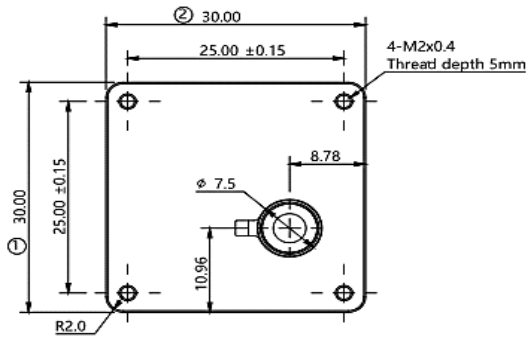


LI-IMX424-FPDLINKIV-065H



LI-IMX424-FPDLINKIV-120H

## DIMENSIONS: LI-IMX424-FPDLINKIV-040H

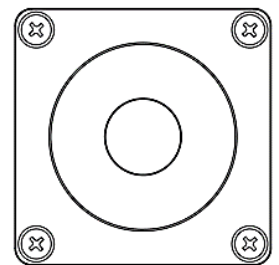
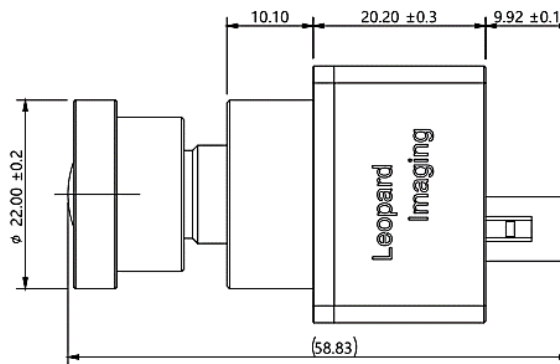
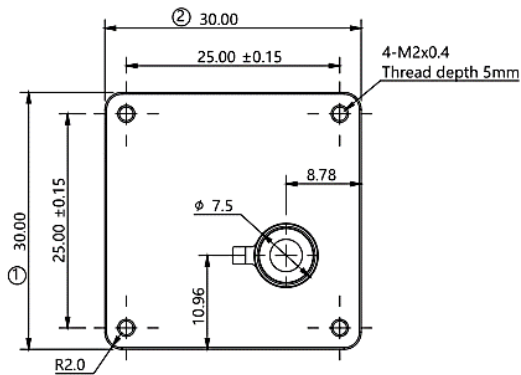


TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5 < X ≤ 3	±0.1	0.5 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30'
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20'
30 < X ≤ 120	±0.3	X > 30	±2	120 < X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

### NOTE:

- ⊗ marked are important sizes.
- Other unmarked tolerance refer to TOLERANCE TABLE.
- All materials are compliant with RoHS & REACH requirements.
- Unit: mm

## DIMENSIONS: LI-IMX424-FPDLINKIV-065H

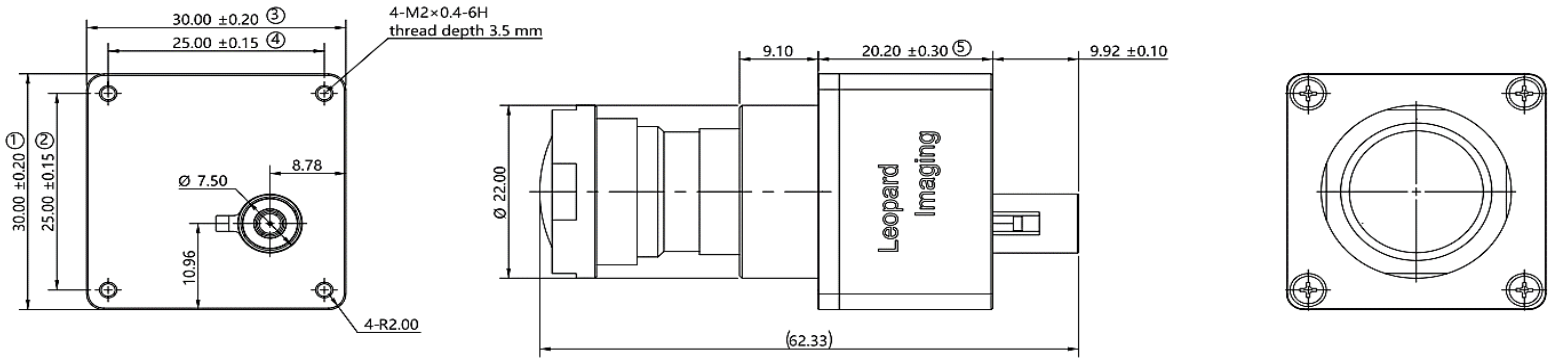


TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
0.5 < X ≤ 3	±0.1	0.5 < X ≤ 3	±0.2	X ≤ 10	±1°
3 < X ≤ 6	±0.1	3 < X ≤ 6	±0.5	10 < X ≤ 50	±30'
6 < X ≤ 30	±0.2	6 < X ≤ 30	±1	50 < X ≤ 120	±20'
30 < X ≤ 120	±0.3	X > 30	±2	120 < X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

### NOTE:

- ⊗ marked are important sizes.
- Other unmarked tolerance refer to TOLERANCE TABLE.
- All materials are compliant with RoHS & REACH requirements.
- Unit: mm

# DIMENSIONS: LI-IMX424-FPDLINKIV-120H



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

## NOTE:

- $\otimes$  marked are important sizes.
- Other unmarked tolerance refer to TOLERANCE TABLE.
- All materials are compliant with RoHS & REACH requirements.
- Unit: mm

## ORDERING INFORMATION

**NOTE:**

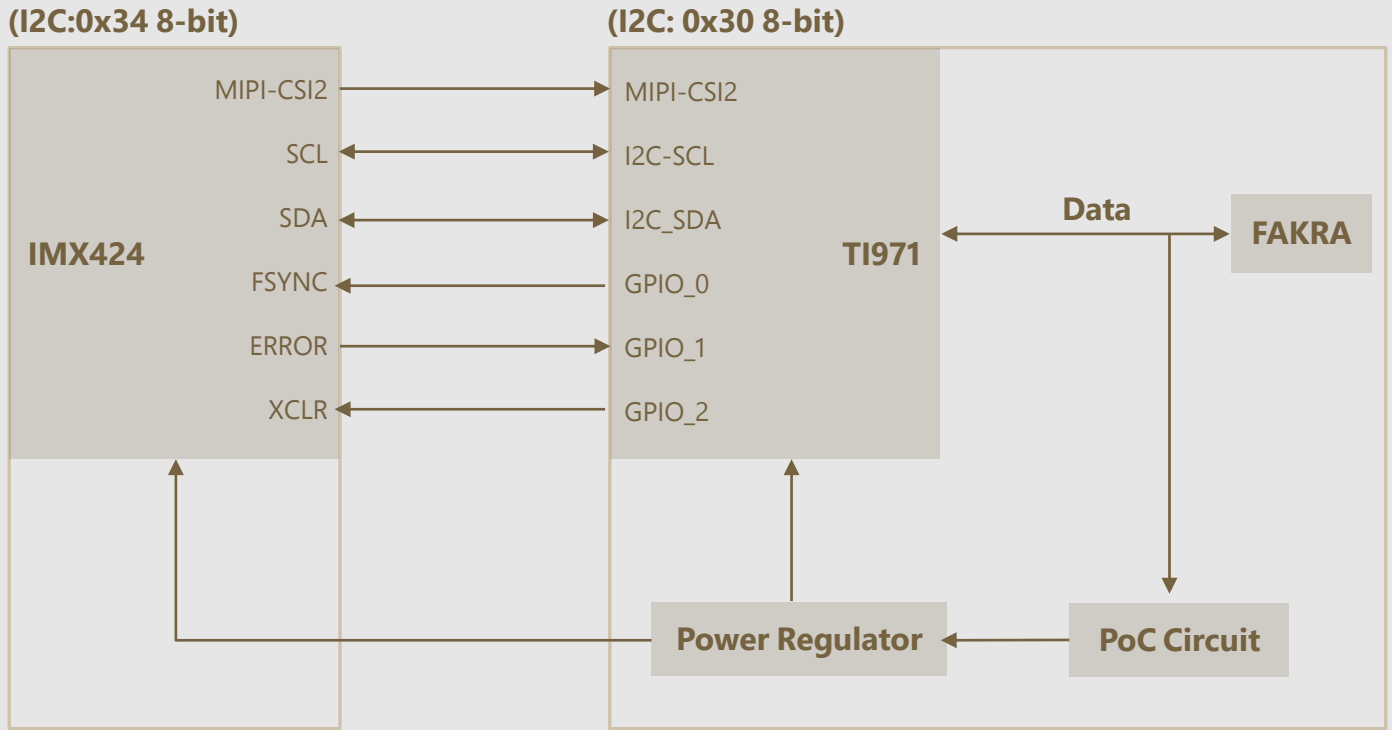
xxxH refers to 040H (FOV H 40°) / 065H (FOV H 65°) / 120H (FOV H 120°)

LI-IMX424-FPDLINKIV-040H	LI-IMX424-FPDLINKIV-065H
	
Lens EFL: 11.9 mm	Lens EFL: 7.9 mm
Aperture, F/#: 2.0	Aperture, F/#: 2.0
Field of View (FOV): 39° (H)	Field of View (FOV): 64.5° (H)
Mount: M12	Mount: M12

LI-IMX424-FPDLINKIV-120H

Lens EFL: 4.49 mm
Aperture, F/#: 1.6
Field of View (FOV): 120° (H)
Mount: M16

# SYSTEM BLOCK DIAGRAM



## USB3.0 CAMERA KIT

LI-FPDLINKIV-USB



Top View



Bottom View

LI-IMX424-FPDLINKIV-xxxH can connect to LI-FPDLINKIV-USB as a USB 3.0 camera.

Part#: **LI-USB30-IMX424-FPDLINKIV-xxxH**

### SPECIFICATIONS

- USB 3.0 Super Speed support
- UVC compliant
- Allows customization
- 12 VDC Power Supply for camera
- Weight: ~ 146 g (without power and USB3.0 cable )
- Single Coax Cable transmits up to 12 meters PoC (Power over Cable)
- Resolution: 3840 x 1928 @ 15 fps
- Power consumption: 113 mA @ 12 VDC
- Compatible with Windows, Linux OS and other OS which have UVC drivers



### BOM

#	Items	QTY
1	LI-IMX424-FPDLINKIV-xxxH	1
2	LI-FPDLINKIV-USB	1
3	3-Meter Fakra Cable	1
4	12 VDC Power Supply	1
5	USB3.0 Cable	1

### SDK SUPPORTED

- Camera Tool Source Code in C#
- Capture & Display
- Register Access Function

## REVISION HISTORY

Revision	Description	Release Date
1.0	First Release.	14 DEC 2019
1.1	1. Changed old format to current format. 2. Updated 120H lens info, power consumption and USB30 tester. 3. Added 2D dimensions for each lens, System Block Diagram, Imaging Orientation and BOM.	4 DEC 2023

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