



LEOPARD
IMAGING

LI-OC0TC1B-MIPI



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INTRODUCTION

The LI-OC0TC1B-MIPI is equipped with OmniVision CMOS digital image mono sensor OC0TC1B which features global shutter and PureCel® Plus technology. This camera outputs RAW data.

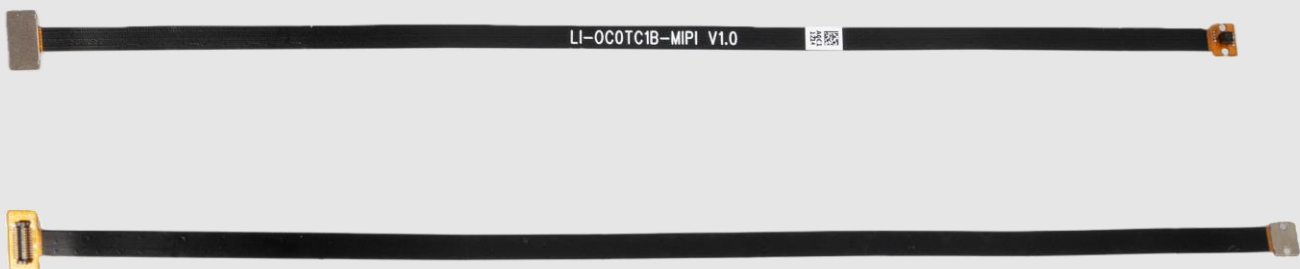
SPECIFICATIONS

Frame Rate	240 fps @ 400 x 400 480 fps @ 200 x 200
Focusing Range	8 mm ~ 100 mm
Sensor	OmniVision CMOS digital image sensor OC0TC1B
Color / Mono	Mono sensor
Optical Format	1/14.464"
Pixel Size	2.2 μ m x 2.2 μ m
Shutter Type	Global shutter
Resolution	400 (H) x 400 (V) (active pixels)
Output Format	8-bit/ 10-bit/ 12-bit / 14-bit RAW data
Interface	1-lane MIPI D-PHY
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 1 g

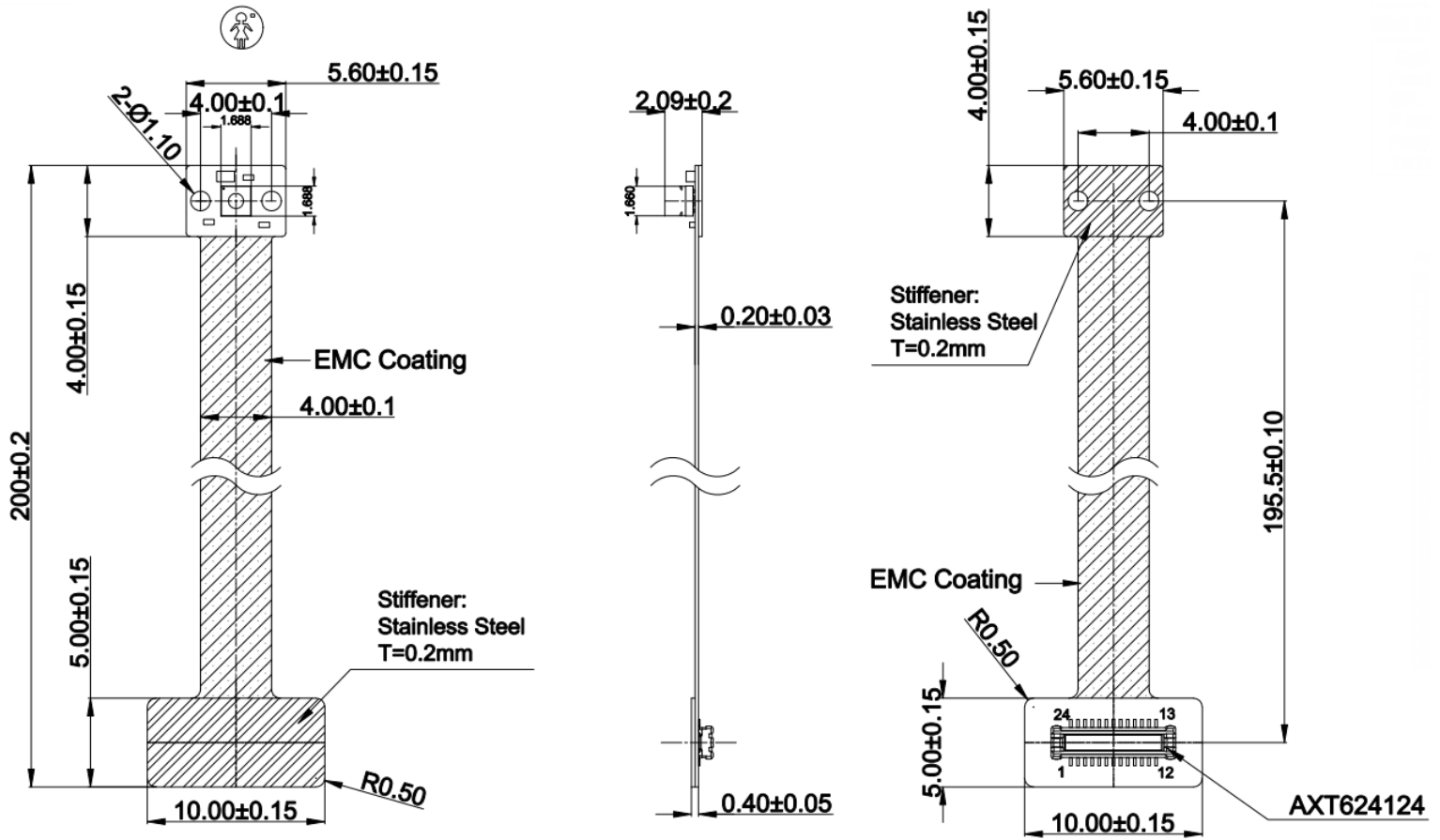
- Machine Vision
- Industrial Automation
- Augmented and Virtual Reality
- Gaming
- Biometric Authentication
- Drones
- 3D imaging
- Industrial bar code scanning

LENS SPECIFICATIONS

Focal Length	2.3 $\pm$ 5% mm
Aperture, F/#	2.3
FOV	103° diagonal
	70° horizontal
	70° vertical
TV Distortion	< -11 %



DIMENSIONS

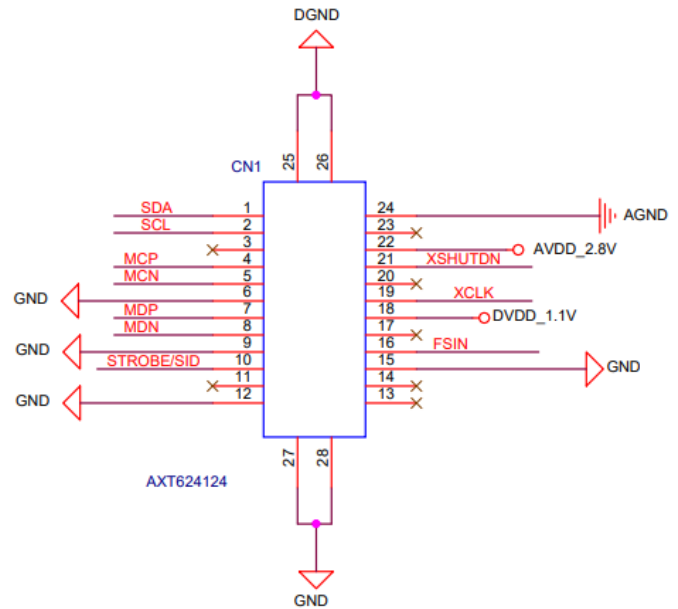


Unit: mm

MODULE CONNECTOR

- Connector Part#: AXT624124
- Number of Positions: 24
- Pitch: 0.4 mm
- Sensor I2C Address: 0X6C (8-bit)
- External Power Supply: 1.1V, 2.8V

Note: Internal 1.8V LDO for GPIO, serial interface I/Os.



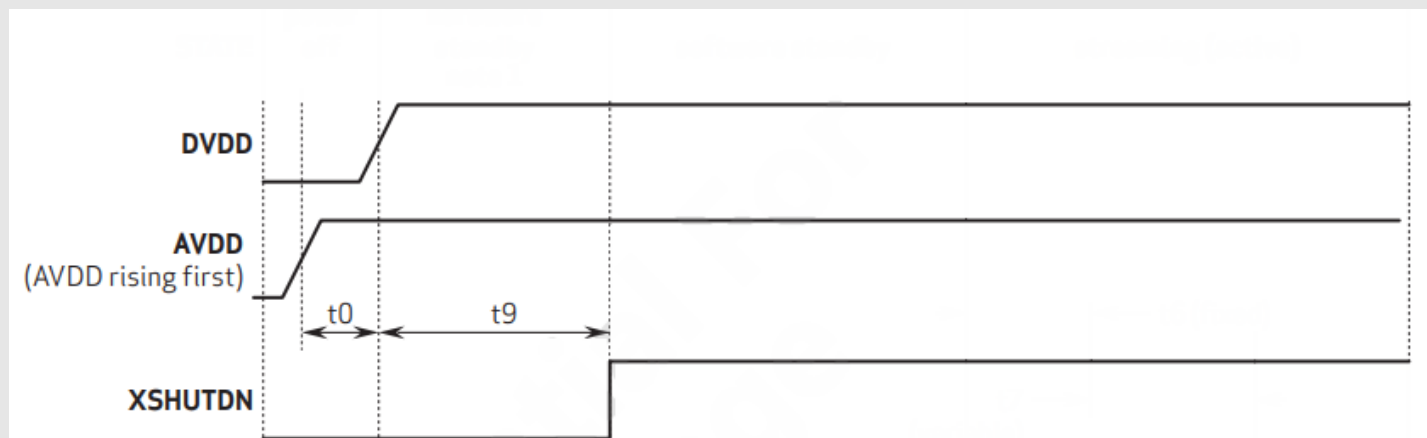
PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	SDA	I/O	1.8V IO Camera I2C SDA signal (Require pull-up at the host)	1.8 V
2	SCL	INPUT	1.8V IO Camera I2C SCL signal (Require pull-up at the host)	1.8 V
3	NC	—	—	—
4	MCP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
5	MCN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
6	GND	—	—	—
7	MDP	OUTPUT	MIPI Data Lane Differential Pair +	MIPI DPHY
8	MDN	OUTPUT	MIPI Data Lane Differential Pair -	MIPI DPHY
9	GND	—	—	—
10	STROBE	I/O	Frame exposure output/SCCB ID select	1.8 V
11	NC	—	—	—
12	GND	—	—	—
13	NC	—	—	—

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	NC	–	–	–
15	GND	–	–	–
16	FSIN	I/O	FSIN I/O	1.8 V
17	NC	–	–	–
18	DVDD1.1V	INPUT	1.1V Digital Power Supply (Must be provided from the host side)	1.1 V
19	XCLK	INPUT	Sensor clock signal (Must be provided from the host side)	1.8 V
20	NC	–	–	–
21	XSHUTDN	INPUT	Asynchronous active LOW reset (Require pullup at host side)	1.8 V
22	AVDD2.8V	INPUT	2.8V Analog Power Supply (Must be provided from the host side)	2.8 V
23	NC	–	–	–
24	AGND	–	–	–

External Power supply Power On Sequence

1. The module has a 1.8V Internal regulator for GPIO and serial interface I/Os.



Item	Symbol	Min.	Max.	Unit
AVDD rising → DVDD rising	T0	0	∞	ms
XSHUTDN rising to system ready	T9	0		ms

Power Consumption

Symbol	Min.	Typ.	Max.	Unit
I_{DVDD}		8.3	TBD	mA
I_{AVDD}		6.9	TBD	

● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	05 Jan 2026
0.2	Updated the P/N for connector.	12 Aug 2026

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