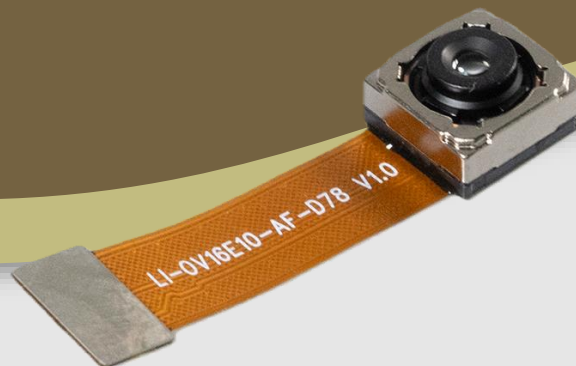




LEOPARD
IMAGING

LI-OV16E10-AF-D78



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INTRODUCTION

The LI-OV16E10-AF-D78 is equipped with OmniVision 16MP CMOS digital image color sensor OV16E10 which features PureCel® Plus technology. This camera is assembled with VCM for auto focus and outputs RAW data.

SPECIFICATIONS

Frame Rate	30 fps @ 4656 x 3496 60 fps @ 3840 x 2160 120 fps @ 1920 x 1080
Focusing Range	7 cm ~ Infinity
Sensor	OmniVision 16MP CMOS digital image sensor OV16E10
Color / Mono	Color sensor
Optical Format	1/2.77"
Pixel Size	1.116 μm x 1.116 μm
Shutter Type	Rolling shutter
Resolution	4565 (H) x 3496 (V) (active pixels)
Output Format	10-bit RGB RAW data
Auto Focus	Supported
VCM for Auto Focus	Yes
Interface	4-lane MIPI D-PHY with speed up to 1.8 Gbps/lane
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 1 g

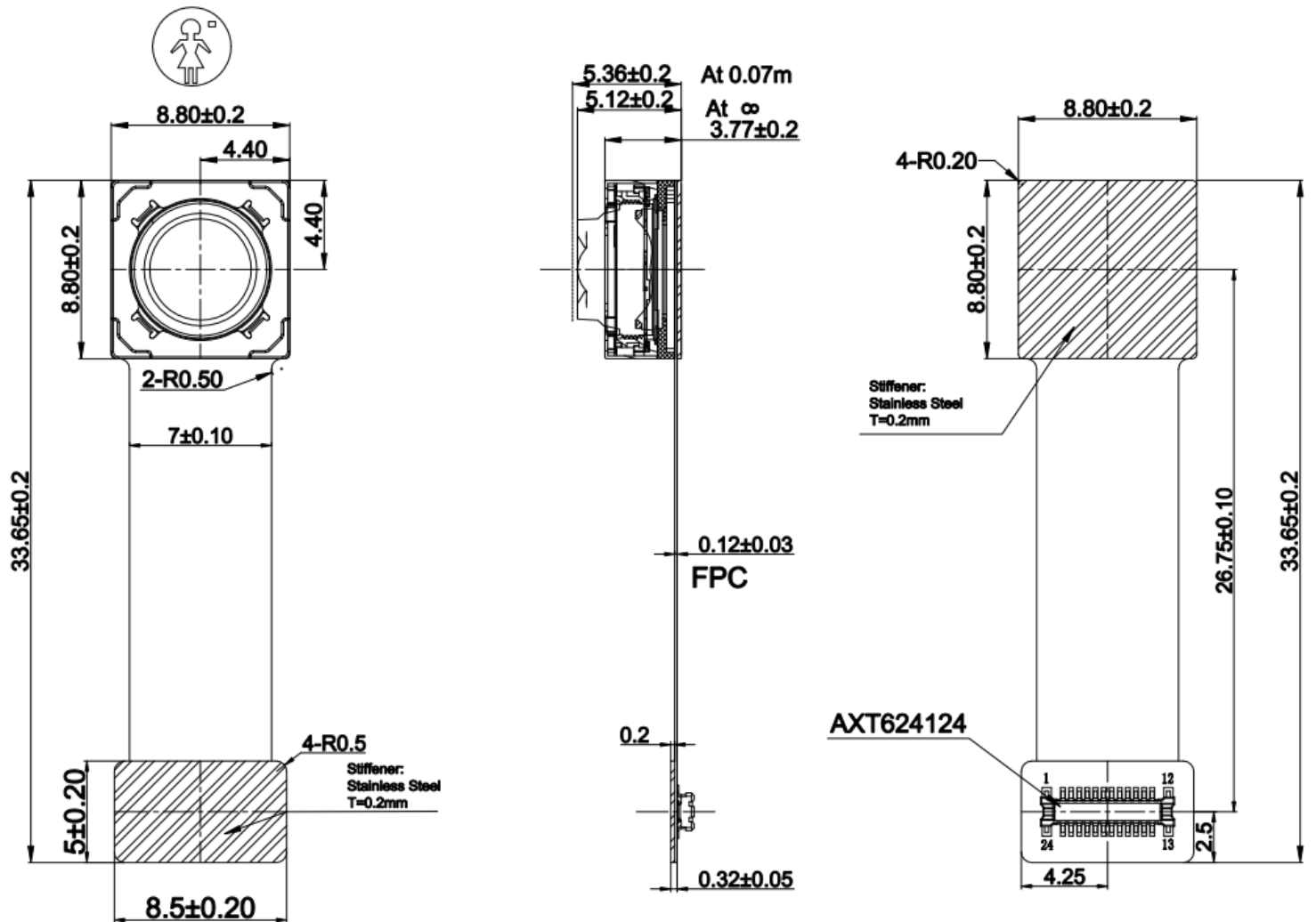
- Mobile Smart Camera
- IoT
- Security

LENS SPECIFICATIONS

Focal Length	3.95mm
Aperture, F/#	1.8 $\pm$ 5 %
FOV	78.4° diagonal
	66.2° horizontal
	52.4° vertical
TV Distortion	< -1.0 %



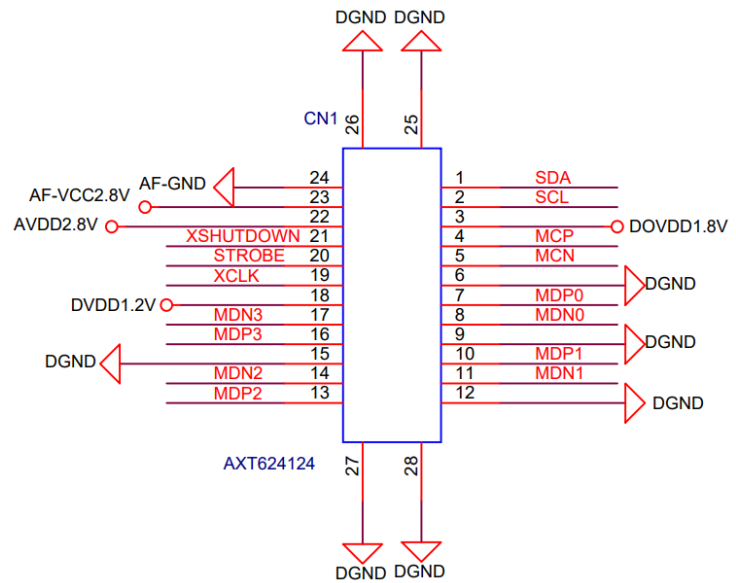
DIMENSIONS



Unit: mm

MODULE CONNECTOR

- Connector Part#: AXT62412
 - Number of Positions: 24
 - Pitch: 0.4 mm
 - Sensor I2C Address: 0X6C (8-bit)
 - External Power Supply: 1.2V, 1.8V, 2.8V
- Note:** 1.2V, 1.8V, 2.8V can rise in any order.



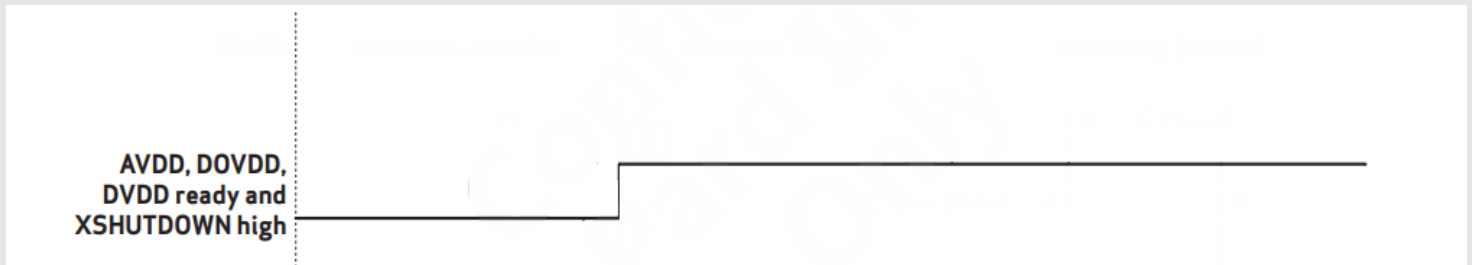
PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	SDA	I/O	1.8V IO Camera I2C SCL signal (Require pull-up at the host)	1.8 V
2	SCL	INPUT	1.8V IO Camera I2C SDA signal (Require pull-up at the host)	1.8 V
3	DOVDD1.8V	INPUT	1.8V I/O Power Supply (Must be provided from the host side)	1.8 V
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	MDP1	OUTPUT	MIPI Data Lane 1 Differential Pair +	MIPI DPHY
11	MDN1	OUTPUT	MIPI Data Lane 1 Differential Pair -	MIPI DPHY
12	GND	-	-	-
13	MDP2	OUTPUT	MIPI Data Lane 2 Differential Pair +	MIPI DPHY

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	MDN2	OUTPUT	MIPI Data Lane 2 Differential Pair -	MIPI DPHY
15	GND	–	–	–
16	MDP3	OUTPUT	MIPI Data Lane 3 Differential Pair +	MIPI DPHY
17	MDN3	OUTPUT	MIPI Data Lane 3 Differential Pair -	MIPI DPHY
18	DVDD1.2V	INPUT	1.2V Digital Power Supply (Must be provided from the host side)	1.2 V
19	XCLK	INPUT	Sensor clock signal (Must be provided from the host side)	1.8 V
20	STROBE	OUTPUT	Frame exposure output indicator	1.8 V
21	XSHUTDOWN	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	AF-VCC2.8V	INPUT	2.8V AF Power Supply (Must be provided from the host side)	2.8 V
24	AF-GND	–	–	–

External Power supply Power On Sequence

1. There is no requirement for the power sequence.
2. Cutting off any power source (AVDD/DVDD/DOVDD) is equivalent to XSHUTDOWN going low and the OV16E10 will enter hardware standby mode, which uses very low power.



Power Consumption

Symbol	Min.	Typ.	Max.	Unit
I_{DOVDD}		1.3	5	mA
I_{DVDD}		170	220	
I_{AVDD}		44	58	

• REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	05 Jan 2026

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