



ALI031 AUTOMOTIVE ADAS CAMERA MODULE

Product Specification

1/2.4 1920*1536 Automotive ADAS Camera Module

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➤ General Description

The AL031A2 series camera module is 3Megapixel high-performance camera for automotive ADAS application. Using Sony's state-of-the-art ISX031 chip, this module has high dynamic range of over 120dB and low dark noise. The ISX031 image sensor has nearly twice pixel density in the horizontal direction comparing to the earlier generation image sensor and the vertical direction pixel density is also higher, making it more friendly for the automotive surrounding view, while maintaining 3 μ m pixel size, without compromising the night performance.

➤ Features

- High quality image with large pixel size;
- Low latency data transfer with GMSL2;
- Over 120dB high dynamic range;
- Automotive grade high reliability, IP67 protection level;
- Provide camera intrinsic parameters from internal EEPROM (by customer needs);
- LFM-LED anti-flicker function;

➤ Applications

- Autonomous driving / car surround view
- Environmental perception of industrial robots

➤ Key Specifications

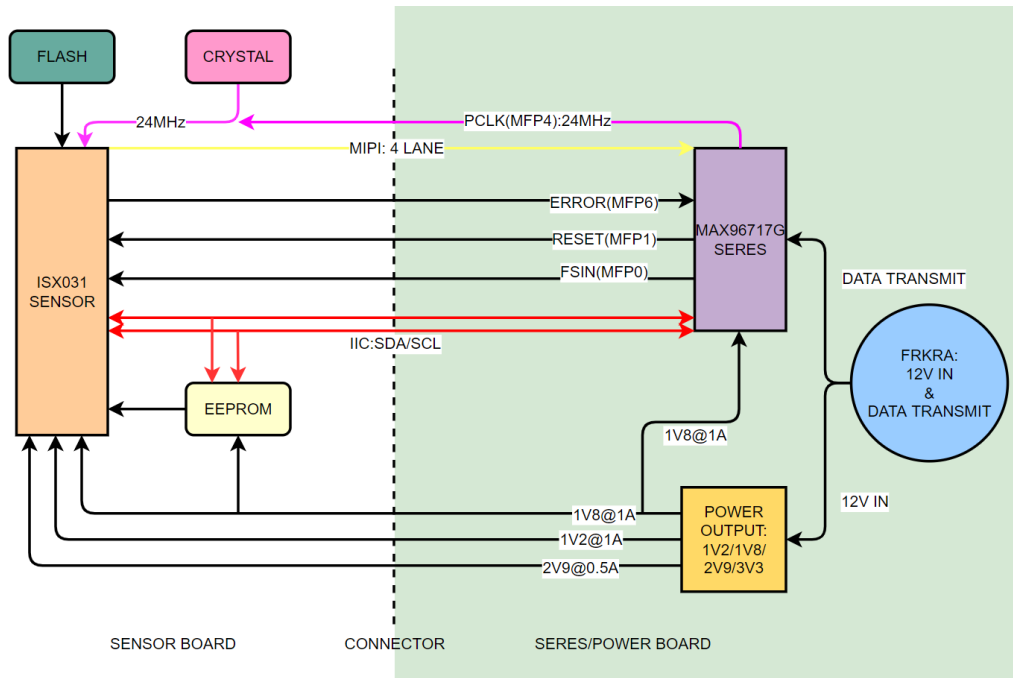
Type	Parameter	Annotation
Field of View	63°/100°/197°	
Photosensitive chip	SONY ISX031	
ISP chip	On chip	
Optical size	1/2.4 inch CMOS	
Pixel size	3.0μm	
Frame rate	20fps/30fps(Typical value)	
Resolution	1920 (H) x 1536 (V)	
Exposure mode	Rolling Shutter	
Dynamic range	120dB	
Image format	YUV422-8bit	
Color Pattern	RGGB	
Serializer chip	MAXIM Max96717	
Output interface	GMSL2(LVDS)	
Working voltage	9V-12V	
Package type	BGA	
Camera interface	Coaxial	
Coupler	Amphenol (default Z Type Fakra)	
Operating temperature	-40°C ~ +85°C	
Storage temperature	-40°C ~ +105°C	

➤ Models and Lens

Model Number	HFOV	VFOV	EFL	F. NO	Protection
ALI2306-SCH-SABA-IP67	63.9±3°	50.6±3°	5.3±5%	2.0±5%	IP67
ALI2310-SCH-SABA-IP67	100.0±3°	78.5±3°	3.47±5%	1.8±5%	IP67
ALI2319-SCS-SABA-IP67	197.0±3°	162.3±3°	1.45±5%	2.0±5%	IP67

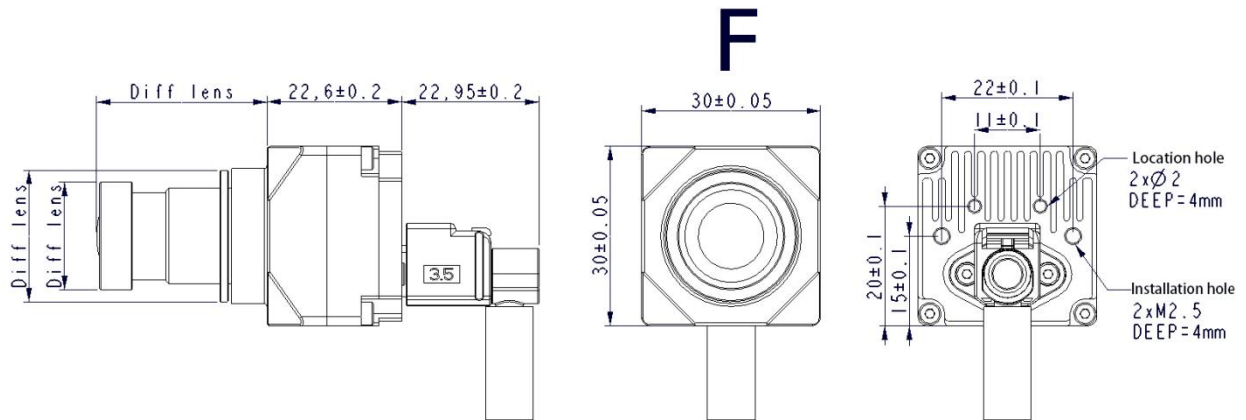
➤ System Diagram

Type	Parameter	Annotation
Serializer	MAXIM Max96717	
IIC address	0x80(8bit address)	
CMOS clock frequency	external crystal	24MHz
GMSL rate	6Gbps	
CMOS Reset control pin	MFP3	Default pull-up 1.8V
IIC Pin	SDA use MFP9 SCL use MFP10	
CMOS Exposure synchronization signal FSIN	MFP0	



ALI031 camera module hardware diagram

➤ Dimensions



➤ Accessories

Name	Model	Specification
Amphenol female to female cable	344-00006-10321	Waterproof Φ 2.8 coaxial shielded wire-RG174 L=2000MM
Amphenol male to female cable	344-00006-10321B	Waterproof Φ 2.8 coaxial shielded wire-RG174 L=2000MM

➤ Contact Us

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