

3MP MIPI CAMERA



GENERAL DESCRIPTION

The camera is equipped with SONY CMOS image sensor ISX900. It can be adapted to different SOC platforms and is suitable for machine vision, aerospace and industrial inspection applications.



KEY PARAMETERS

Sensor	SONY 3.2MP IMX900 RGGB
ISP	/
Image Size	1/3.1 inch CMOS
Exposure mode	Global shutter
Output Pixels	2064H*1552V
Frame rate	30fps
Pixel Size	2.25um*2.25um
HDR Support	Yes
Output data	MIPI/RAW12
Power Supply	3.3V
Current	<350mA@3.3VDC
Camera interface	FPC
Connector	FH67-30S-0.5SV
Operating temp.	-30 to +75°C
Performance temp.	-10 to +60°C
Storage temp.	-40 to +85°C
Dimensions	W: 30mm, L:35mm, H:19.4mm
Weight	<50g



Features

- Output format: RAW format
- Industrial grade
- Support different focal length lens



Application

- Machine-vision
- Intelligent transportation
- Aeronautics and Astronautics
- Industrial inspection

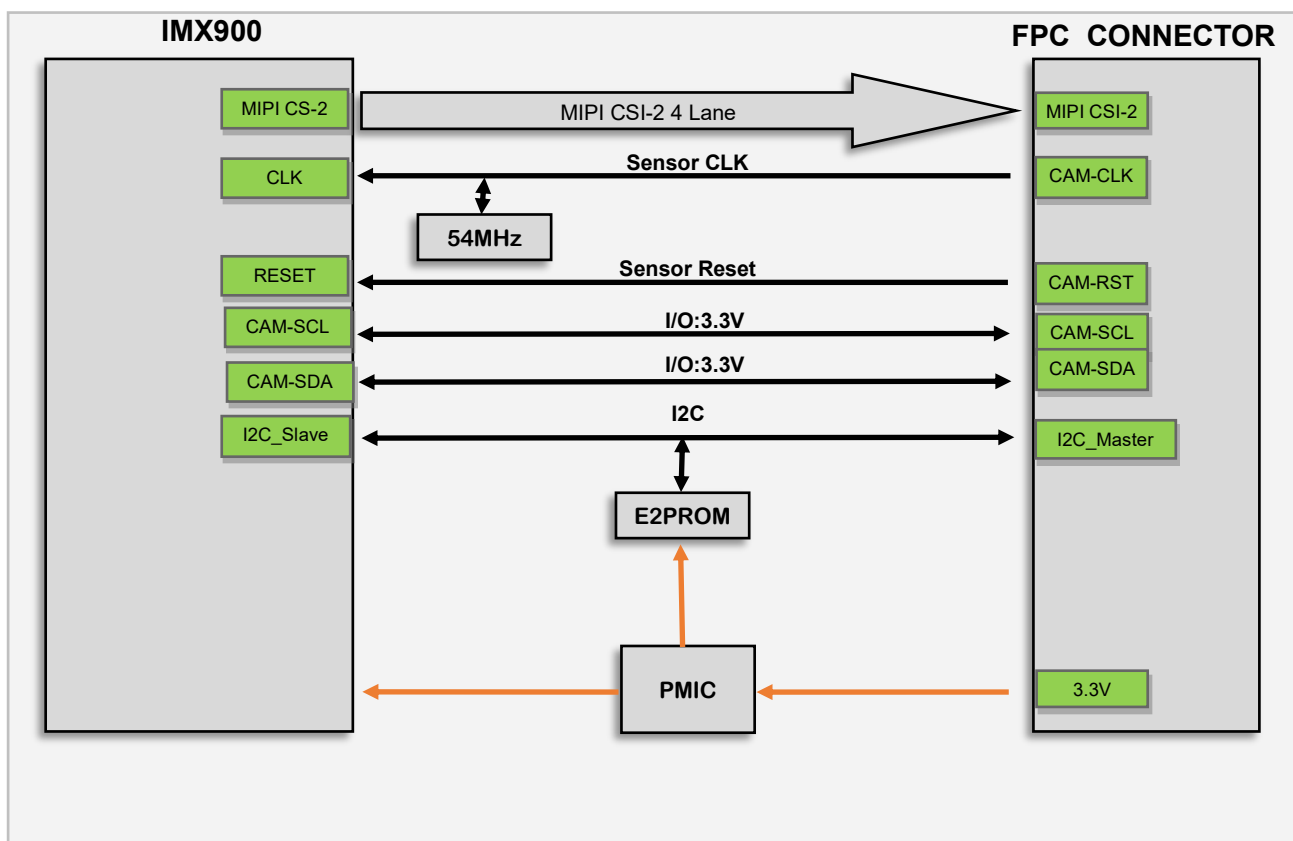




HARDWARE SETTING

EEPROM	
I2C Address	0xA0(8bit address)

Sensor	
Model	ISX031
I2C Address	0x6C(8bit address)



Block Diagram





Pin Definitions

NO	Pin Name	Type	Description
1	FRSYNC1	INPUT:1.8V	帧同步信号1
2	FRSYNC2	INPUT:1.8V	帧同步信号2
3	GPIO0	OUTPUT:	GPIO信号
4	GND	POWER	
5	XHS	I/O:1.8V	主动模式的水平同步信号
6	XVS	I/O:1.8V	主动模式的垂直同步信号
7	GND	POWER	
8	D0_N	OUTPUT	MIPI
9	D0_P	OUTPUT	MIPI
10	GND	POWER	
11	D1_N	OUTPUT	MIPI
12	D1_P	OUTPUT	MIPI
13	GND	POWER	
14	CLK_N	OUTPUT	MIPI
15	CLK_P	OUTPUT	MIPI
16	GND	POWER	
17	D2_N	OUTPUT	MIPI
18	D2_P	OUTPUT	MIPI
19	GND	POWER	
20	D3_N	OUTPUT	MIPI
21	D3_P	OUTPUT	MIPI
22	GND	POWER	
23	POW_RES	INPUT:3.3V/1.8V	相机上电信号
24	SENSOR-CLK	INPUT:54MHZ(1.8V)	时钟信号输入（模组默认内置晶振）
25	GND	POWER	
26	CAM-SCL	I/O:3.3V	UP 1K(FRSYNC:L I2C Address 7' 36)
27	CAM-SDA	I/O:3.3V	UP 1K(FRSYNC:L I2C Address 7' 36)
28	GND	POWER	
29	VCC-3.3V	POWER	
30	VCC-3.3V	POWER	



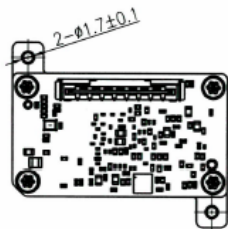
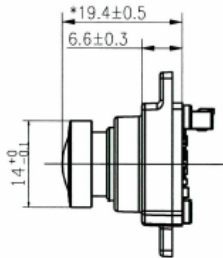
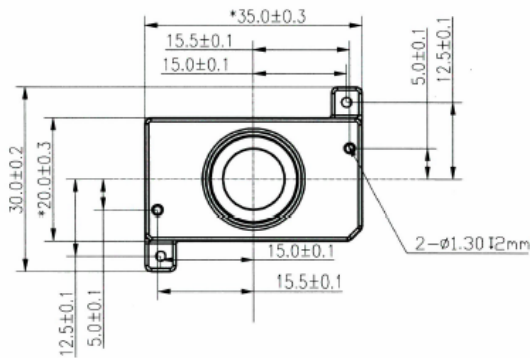


MODEL AND LENS

Model	HFOV	VFOV	F.No	EFL	Max Optical Distortion	Lens Mount
SG3-IMX900C-MIPI-H60T	69.8°	55.4°	F2.2	3.24mm	0.16%	M12
SG3-IMX900C-MIPI-H120T	121.4°	89.2°	F2.2	2.27mm	-73.5%	M12



DIMENSIONS



Note:

△ There are different heights of this size to match different lenses. Please refer to 3D digital analog size for details.



This icon indicates the imaging direction is positive.



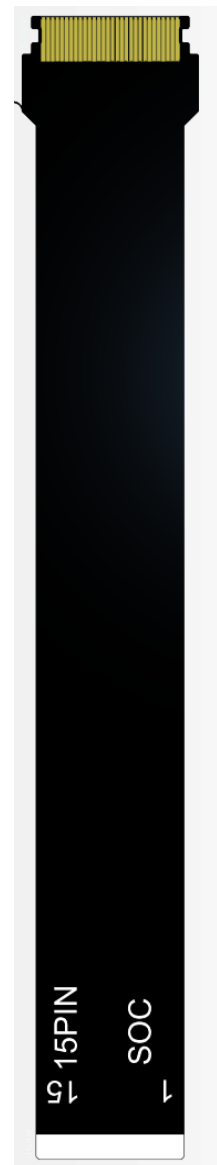


Attachment

Through 2 types of FPC cables, 15pin and 22pin signals can be output. Different specifications can be selected according to the needs.

Part number	Name	description	remark
339901-0010	22Pin FPC	Spacing 0.5mm Length 120mm	Jetson Orin Nano/NX DK 4lane
339901-0011	15Pin FPC	Spacing 1mm Length 120mm	Jetson Nano/Raspberry Pi 2lane

15Pin		
Number	Pin	remark
1	GND	
2	D1N	
3	D1 P	
4	GND	
5	D2 N	
6	D2 P	
7	GND	
8	CLK N	
9	CLK P	
10	GND	
11	SENSOR-RESETn	3.3V or 1.8V/IO
12	CAM-CLK	Default: Modules use an internal 24MHz clock
13	CAM-SCL	3.3V/IO
14	CAM-SDA	3.3V/IO
15	VCC-3.3V	





Attachment

22Pin		
Number	Pin	remark
1	GND	
2	D1 N	
3	D1 P	
4	GND	
5	D2 N	
6	D2 P	
7	GND	
8	CLK N	
9	CLK P	
10	GND	
11	D3 N	
12	D3 P	
13	GND	
14	D4 N	
15	D4 P	
16	GND	
17	SENSOR-RESETn	1.8V or 3.3V/IO
18	CAM-CLK	Default: Modules use an internal 24MHz clock
19	GND	
20	CAM-SCL	3.3V/IO
21	CAM-SDA	3.3V/IO
22	VCC-3.3V	





PLATFORMS SUPPORT

Platforms	Product Link
NVIDIA Jetson Platforms (Jetson Orin Nano/NX) 	Provide development driver package https://www.sensing-world.com/jetson_camera_ecosystem/ 





Revision History

Version	Description	Release date
Rev1.0	First Release	2025.03

