SG3-ISX031C-MIPI-Hxxx

3MP MIPI CAMERA

www.sensing-world.com

GENERAL DESCRIPTION

The camera is equipped with SONY CMOS image sensor ISX031. It has an automotive-grade sensor with a well-tuned Image Signal Processor (ISP) that produces exceptional image quality, can be adapted to different SOC platforms .



KEY PARAMETERS

Sensor	SONY 2.95MP ISX031 RGGB
ISP	Built-in
Image Size	1/2.42 inch CMOS
Output Pixels	1920H*1536V
Frame rate	max 60fps
Pixel Size	3.0um*3.0um
HDR Support	Yes
Output data	MIPI/YUV422-8bit
Power Supply	3.3V
Current	<500mA@3.3VDC
Camera interface	FPC
Connector	FH67-30S-0.5SV
Operating temp.	-20 to +75℃
Performance temp.	-20 to +60℃
Dimensions	W: 20mm, L:35mm, H:16.2mm
Weight	<50g

Features

- Output format: YUV422 format
- Car gauge grade high performance
- Support external triggering
- Multi-Camera synchronization Support
- Support different focal length lens

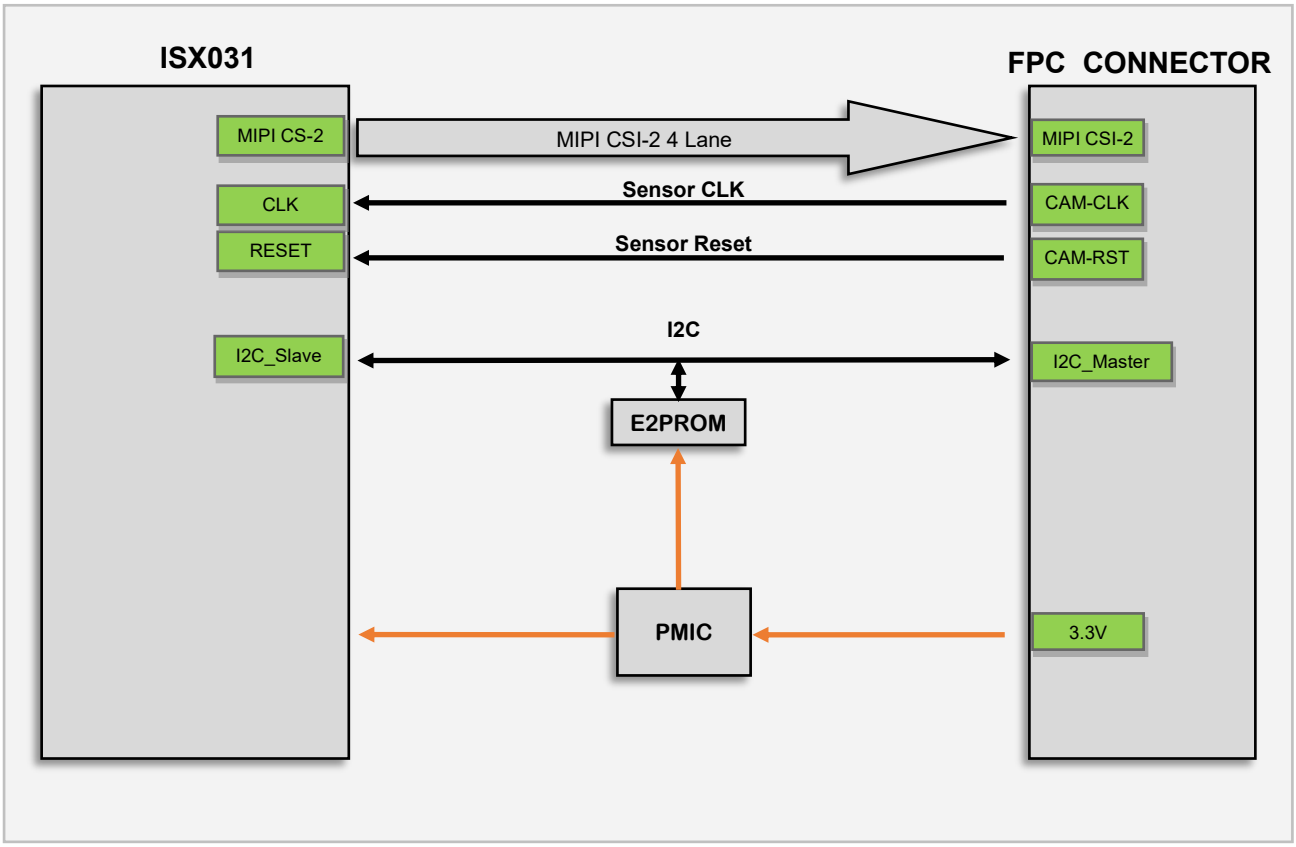
Application

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

HARDWARE SETTING

EEPROM	
I2C Address	0xA0(8bit address)

Sensor	
Model	ISX031
I2C Address	0x34(8bit address)



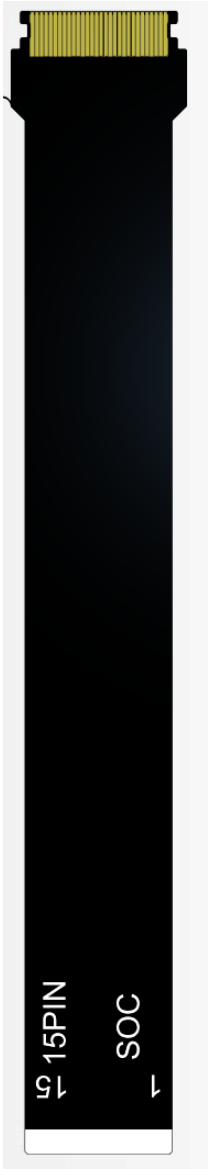
Block Diagram

Pin Definitions

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

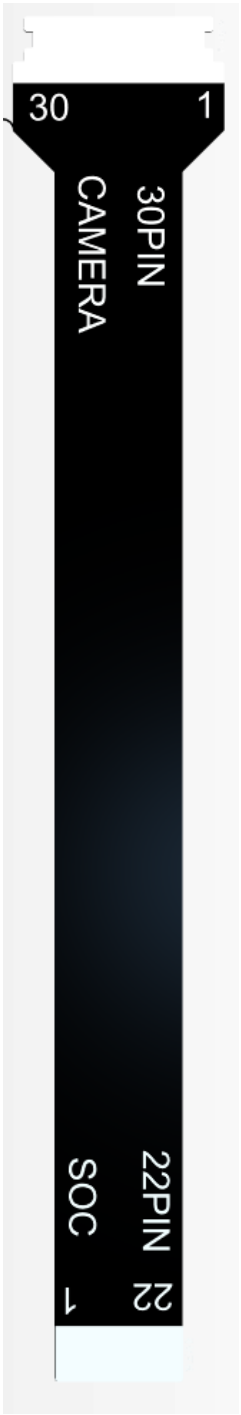
Part number	Name	description	remark
339901-0010	22Pin FPC	Spacing 0.5mm	Jetson Orin Nano/NX DK 4lane
339901-0011	15Pin FPC	Spacing 1mm	Jetson Nano/Raspberry Pi 2lane

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	



Pin Definitions

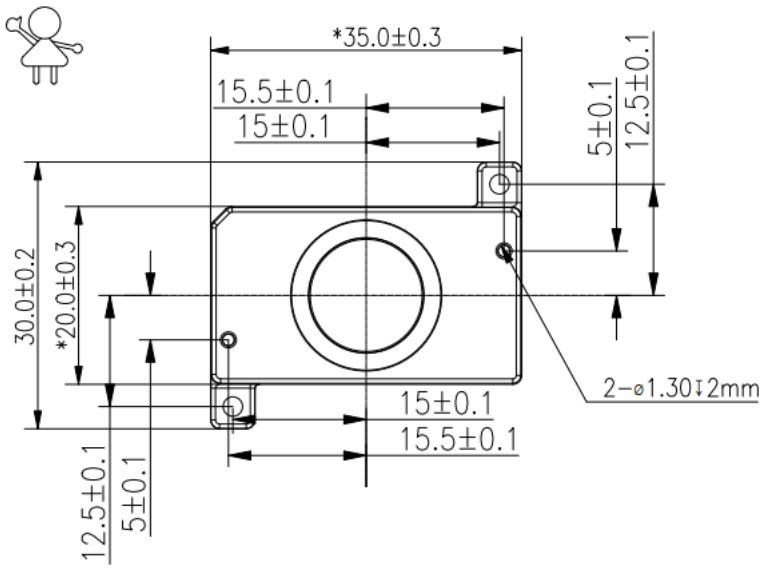
22Pin		
Number	**Pin**	**remark**
1	GND	
2	D1 N	
3	D1 P	
4	GND	
5	D2 N	
6	D2 P	
7	GND	
8	CLK N	
9	CLK P	
10	GND	
11	D3 N	
12	D3 P	
13	GND	
14	D4 N	
15	D4 P	
16	GND	
17	SENSOR-RESETn	1.8V or 3.3V/IO
18	CAM-CLK	Default: Modules use an internal 24MHz clock
19	GND	
20	CAM-SCL	3.3V/IO
21	CAM-SDA	3.3V/IO
22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

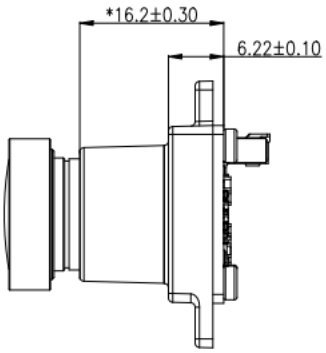


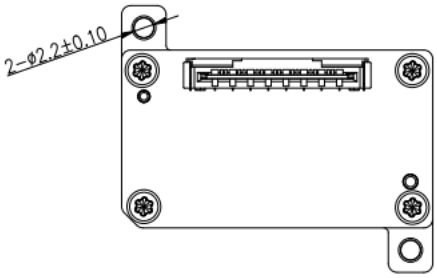
MODEL AND LENS

Model	HFOV	VFOV	F.No	EFL	Max Optical Distortion	Lens Mount
SG3-ISX031C-MIPI-H60F	60.35°	47°	F1.6	5.8mm	-11.5%	M12
SG3-ISX031C-MIPI-H100F1	100.4°	78°	F1.6	3.55mm	-49%	M12
SG3-ISX031C-MIPI-H120H	118.39°	91.45°	F2.0	3.019mm	-92.2%	M12
SG3-ISX031C-MIPI-H190X	196°	154.5°	F2.0	1.51mm	-154.2%	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.

Diagram

PLATFORMS SUPPORT

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

Revision History

Version	Description	Release date
Rev1.0	First Release	2024.01

Contact Us

SZ Sensing TECH CO., LTD

HQ Address: 8/F, block B, building 1,wisdom home,No.76,Baohe Avenue, Baolong street, Longgang District, Shenzhen

Phone: +86-755-28990915

Email: Sales@sensing-world.com

Company Website: www.sensing-world.com

Online Message: https://www.sensing-world.com/lxwm

WECHAT SKYPE WhatsApp