

3MP R-Linc CAMERA

GENERAL DESCRIPTION

The camera is equipped with SONY CMOS image sensor ISX031 and Rsemi R-Linc serializer RLC91603. It has an automotive-grade sensor with a well-tuned Image Signal Processor (ISP) that produces exceptional image quality, which comes with an IP67-rated enclosure – is supplied with an AA and M12 lens that is focused and glued in our factory.

KEY PARAMETERS

Sensor	SONY 2.95MP ISX031 RGGB
ISP	Built-in
Image Size	1/2.42 inch CMOS
Output Pixels	1920H*1536V
Pixel Size	3.0um*3.0um
Frame Rate	1920*1536@30fps/60fps
HDR Support	Yes
LFM	Yes
Output data	YUV422@8bit
Serializer	Rsemi RLC91603
Camera Interface	R-Linc
Power Supply	9~16V POC
Current	<200mA@12VDC
Connector	Amphenol Fakra (Z Code)
Operating temp. range	-40~+85°C
Dimensions	W: 25mm, L:25mm, H:18.6mm
Weight	<50g



Features

- Output format: Uncompressed YUV422 format
- AA IP67 compliant lens focused and glued at our factory
- Multi-Camera synchronization Support
- Support different focal length lens



Application

- Automotive
- ADAS + Viewing Fusion
- High Dynamic Range Imaging
- Autonomous Driving
- Robots



HARDWARE SETTING

Serializer	
Model	RLC91603
I2C Address	0x42(8bit address)
Rate	R-LINC (6.4G bps)

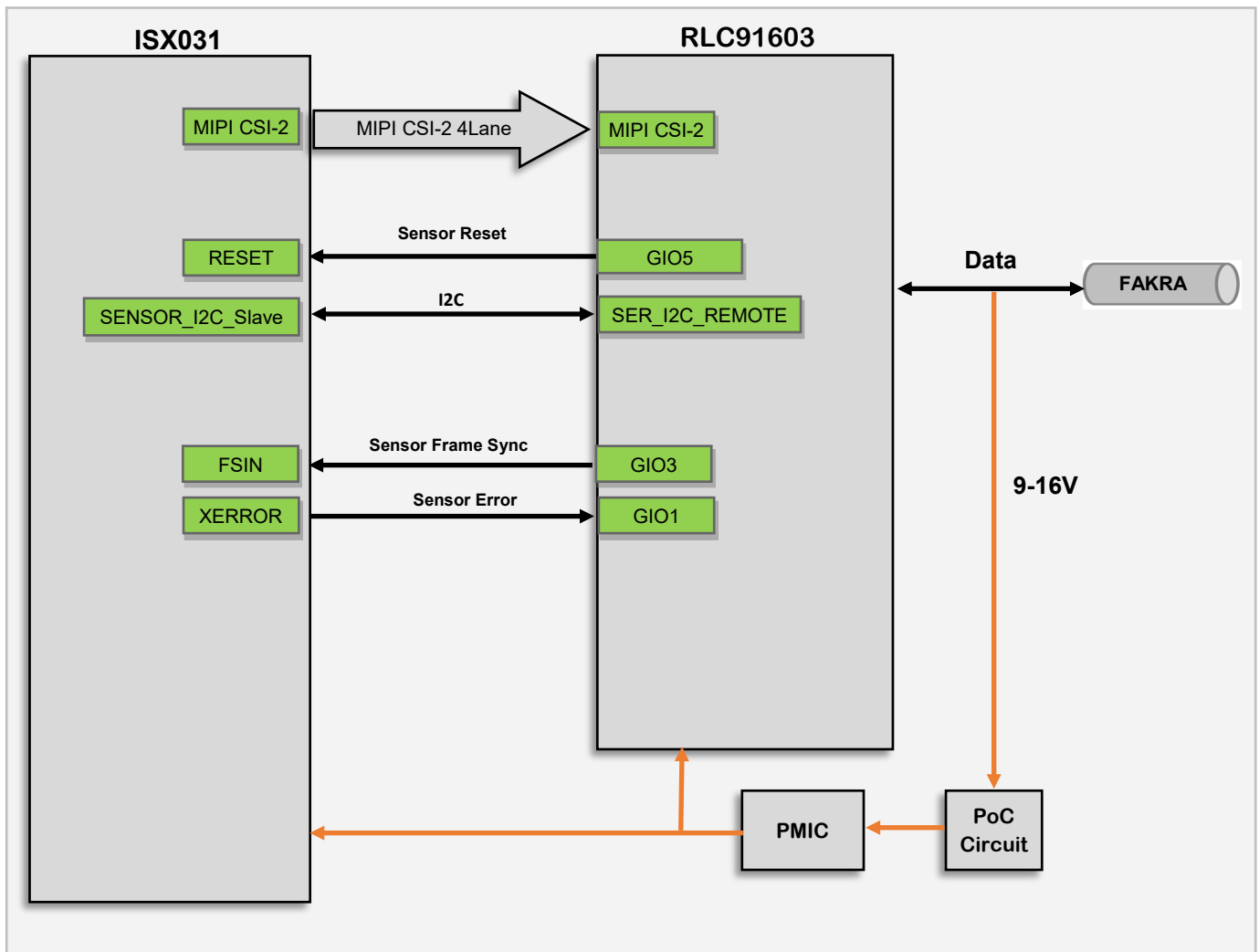
Sensor	
Model	ISX031
I2C Address	0x34 (8bit address)
Frame Sync	Controlled by RLC91603 GIO3
Reset	Controlled by RLC91603 GIO5

Interface Circuit Diagram





BLOCK DIAGRAM



Block Diagram

- ※ The camera module has a built-in ISP that outputs YUV data. The backend does not need to configure an image sensor, but only needs to configure SerDes;
- ※ For SerDes setting code, please contact Sales@sensing-wolrd.com ;
- ※ The camera support store camera internal parameters, if you need to obtain the internal parameters reading method, please note before placing the order



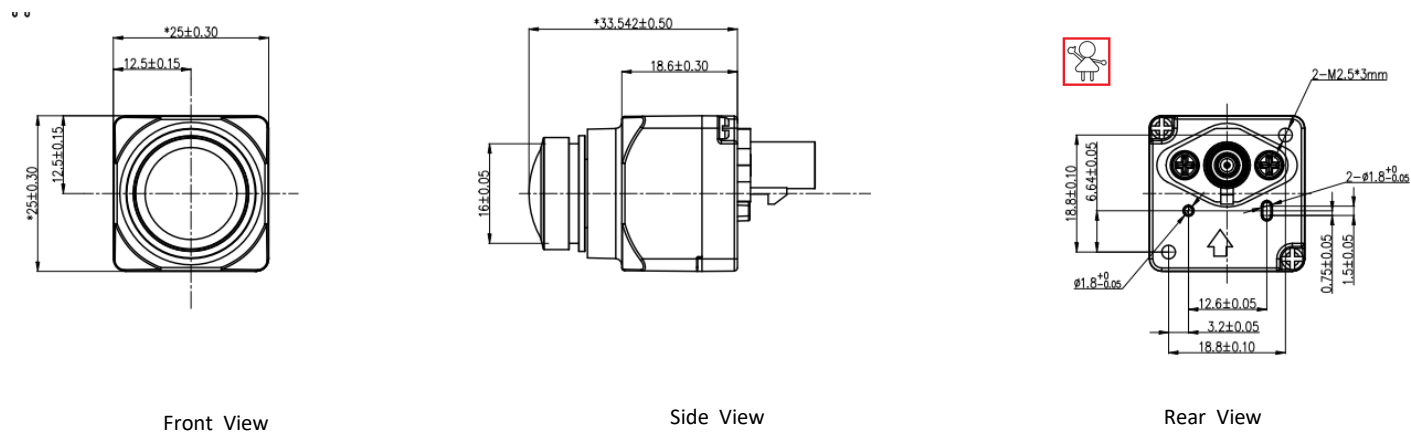


MODEL AND LENS

Model	HFOV	VFOV	F.No	EFL	Max Optical Distortion	Water-proof	Lens Mount
SG3S-ISX031C-R1A-H30X	30°	24°	1.6	10.96mm	-2.5%	IP67	M12
SG3S-ISX031C-R1A-H60FA	60°	46°	1.6	5.8mm	-21%	IP67	AA
SG3S-ISX031C-R1A-H100F1A	100°	78°	1.6	3.55mm	-58%	IP67	AA
SG3S-ISX031C-R1A-H120UA	118°	92°	2	3mm	-92%	IP67	AA
SG3S-ISX031C-R1A-H190XA	196°	154°	2.0	1.51mm	-155%	IP67	AA



DIMENSIONS



Note:

The height of this module varies when matching different lenses. Please refer to 3D digital analog size for details.

 This icon indicates the imaging direction is positive.

Dimension



PLATFORMS SUPPORT

Platforms	Product Link
NVIDIA Jetson platforms 	Provide development driver package https://www.sensing-world.com/jetson_camera_ecosystem/ 

※ For development support, please contact Sales@sensing-wolrd.com;

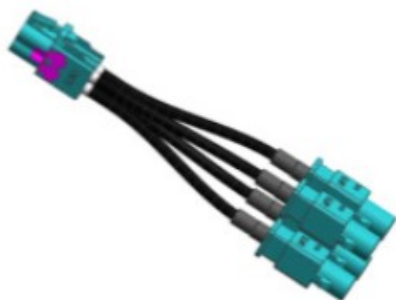




ACCESSORIES

◇ Coaxial Cable

Product Name	Order PN#	Specification
Mini-fakra Coaxial Cable 4-in-1(Rosenberg)	R4JC-JC-ZZZZ-0500L	Mini-fakra, 4 in 1, 0.5m, Female to Female
Mini-fakra Coaxial Cable 4-in-1 (TE)	T4JC-PC-ZZZZ-0500A	Mini-fakra, 4 in 1, 0.5m, Male to Female
Mini-fakra Coaxial Cable 4-in-1(Rosenberg)	R4JC-PC-ZZZZ-0500L	Mini-fakra, 4 in 1, 0.5m, Male to Female
Mini-fakra Coaxial Cable 4-in-1 (TE)	T4JC-JC-ZZZZ-0500A	Mini-fakra, 4 in 1, 0.5m, Female to Female
Camera coaxial Cable	SG-JSZPSZ2000L	2M, Male to Female, IP67
Camera coaxial Cable	SG-JSZJSZ2000L	2M, Female to Female, IP67
Camera coaxial Cable	SG-JSZPSZ3000L	3M, Male to Female, IP67
Camera coaxial Cable	SG-JSZJSZ3000L	3M, Female to Female, IP67
Camera coaxial Cable	SG-JSZPSZ5000L	5M, Male to Female, IP67
Camera coaxial Cable	SG-JSZJSZ5000L	5M, Female to Female, IP67
Camera coaxial Cable	SG-JSZJSZ7000L	7M, Female to Female, IP67
Camera coaxial Cable	SG-JSZJSZ8000L	8M, Female to Female, IP67
Camera coaxial Cable	SG-JSZPSZL100L	10M, Male to Female, IP67
Camera coaxial Cable	SG-JSZJSZL100L	10M, Female to Female, IP67
Camera coaxial Cable	SG-JSZJSZL120L	12M, Female to Female, IP67
Camera coaxial Cable	SG-JSZJSZL160L	16M, Female to Female, IP67
Camera coaxial Cable	SG-JSZJSZL200L	20M, Female to Female, IP67





Revision History

Version	Description	Release date
Rev1	First Release	Apr.2024

