

8MP GMSL3 CAMERA



GENERAL DESCRIPTION

The camera is equipped with On-semi Semiconductor CMOS image sensor AR0820 and Maxim GMSL3. 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 lens that is focused and glued in our factory.



KEY PARAMETERS

Sensor	ONSEMI 8.3MP AR0820 RGGB
ISP	GW5300
Image Size	1/2 inch CMOS
Output Pixels	3840H*2160V
Pixel Size	2.1um*2.1um
Frame Rate	3840*2160@30fps
HDR Support	Yes
LFM	/
Output data	YUV422@8bit
Serializer	MAXIM MAX96793
Camera Interface	GMSL3
Power Supply	9~16V POC
Current	<400mA@12VDC
Connector	Amphenol Fakra (Z Code)
Operating temp. range	-40~+85°C
Dimensions	W: 30mm, L:30mm, H:22.57mm
Weight	<80g



Features

- Output format: Uncompressed YUV422 format
- S-mount 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	Max96793
I2C Address	0x80 (8bit address)
Rate	GMSL3 (12G bps)

ISP	
Model	GW5300
I2C Address	0xDA (8bit address)
Reset	Controlled by Max96793 MFP0

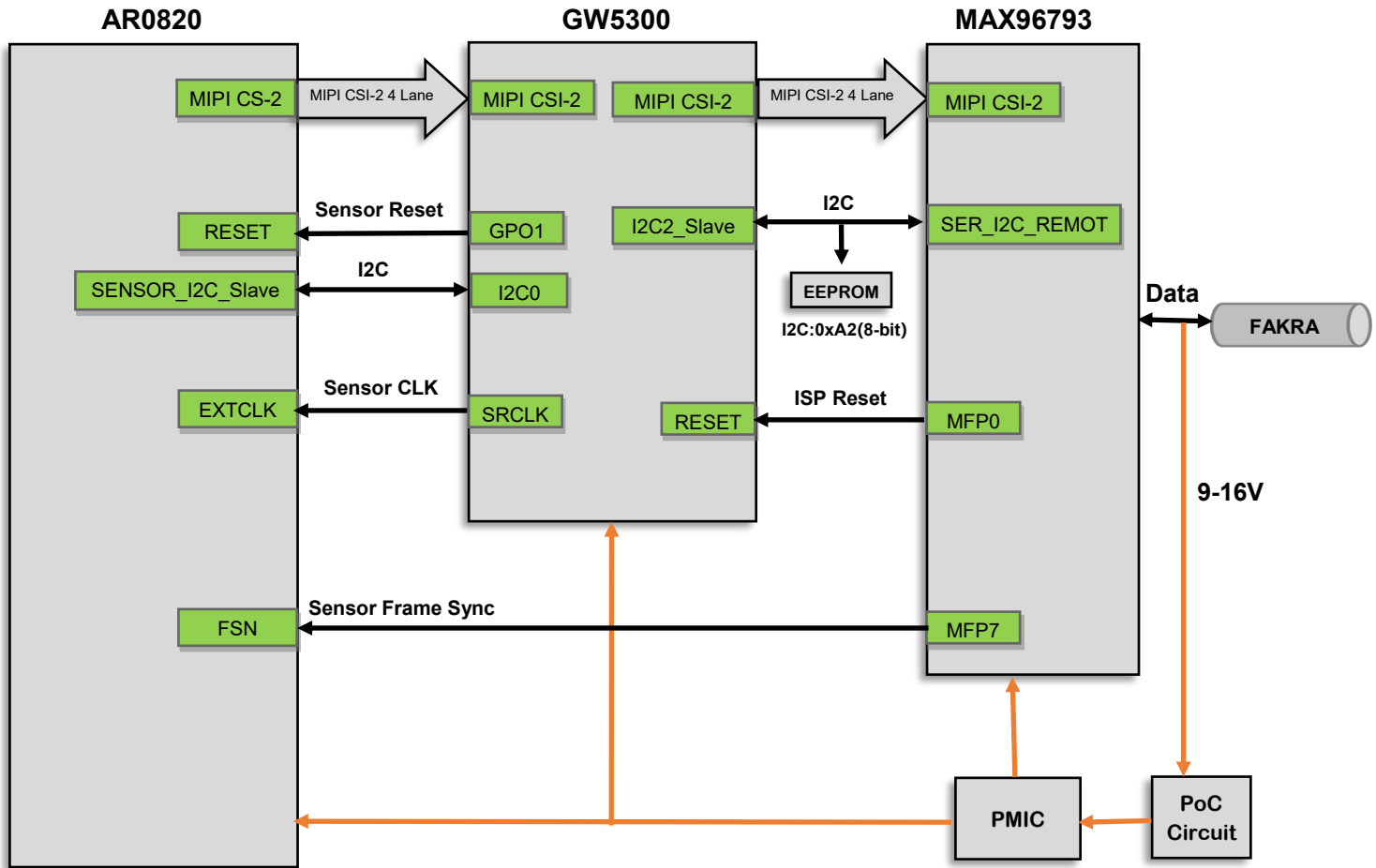
Sensor	
Model	AR0820
I2C Address	0x20 (8bit address)
Frame Sync	Controlled by Max96793 MFP7

Interface Circuit Diagram





BLOCK DIAGRAM



Block Diagram

※ The camera has an ISP image sensor, which outputs YUV data, and the backend does not need to configure the image sensor, only SerDes;

※ For SerDes setting code, please contact Sales@sensing-wolrd.com ;

※ Support store camera internal parameters, if you need to obtain the internal parameters reading method, please note before placing the order



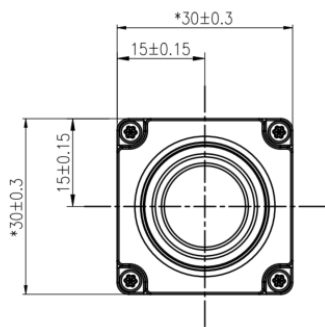


MODEL AND LENS

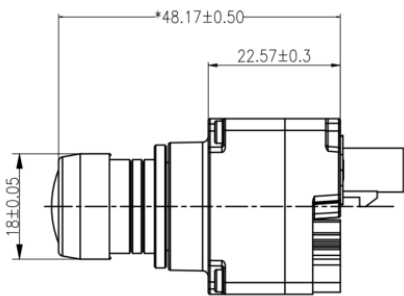
Model	HFOV	VFOV	F.No	EFL	Max Optical Distortion	Water-proof	Lens Mount
SG8S-AR0820C-5300-G3A-H30YA	30°	17°	1.6	15.3mm	-2.7%	IP67	AA
SG8S-AR0820C-5300-G3A-H60SA	64°	33°	1.8	7.87mm	-14%	IP67	AA
SG8S-AR0820C-5300-G3A-H120YA	120°	66°	1.6	4.01mm	-57.9%	IP67	AA



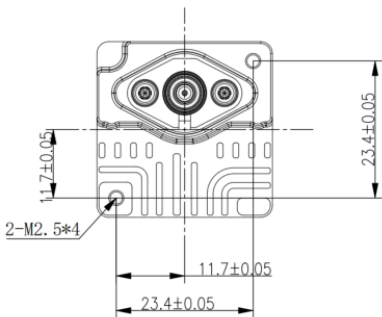
DIMENSIONS



Front View



Side View



Rear View

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



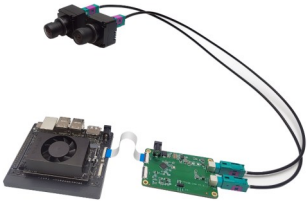
This icon indicates the imaging direction is positive.

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	Mar.2024





Contact Us

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WECHAT



SKYPE



WhatsApp

