

3MP GMSL2F CAMERA



GENERAL DESCRIPTION

The camera is equipped with ONSEMI CMOS image sensor AR0341 and Maxim GMSL2. It has an automotive-grade sensor , which comes with an IP67-rated enclosure – is supplied with M12 lens that is focused and glued in our factory.



KEY PARAMETERS

Sensor	ONSEMI 2.95MP AR0341 RGGB
ISP	/
Startup mode	From I2C
Image Size	1/3.6 inch CMOS
Output Pixels	1920H*1536V
Pixel Size	2.1um*2.1um
Frame Rate	Max 60fps
HDR Support	Yes
LFM	Yes
Output data	RAW 12
Serializer	MAXIM MAX96717F
Camera Interface	GMSL2
Power Supply	9~16V POC
Current	<200mA@12VDC
Connector	Amphenol Fakra (Z Code)
Operating temp. range	-40~+85°C
Dimensions	W: 24mm, L:24mm, H:16.5mm
Weight	<50g



Features

- Output format: Uncompressed RAW format
- S-mount IP67 compliant lens focused and glued at our factory
- Multi-Camera synchronization Support
- External trigger support



Application

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





HARDWARE SETTING

Serializer	
Model	Max96717F
I2C Address	0x80(8bit address)
Rate	GMSL2 (3G bps)

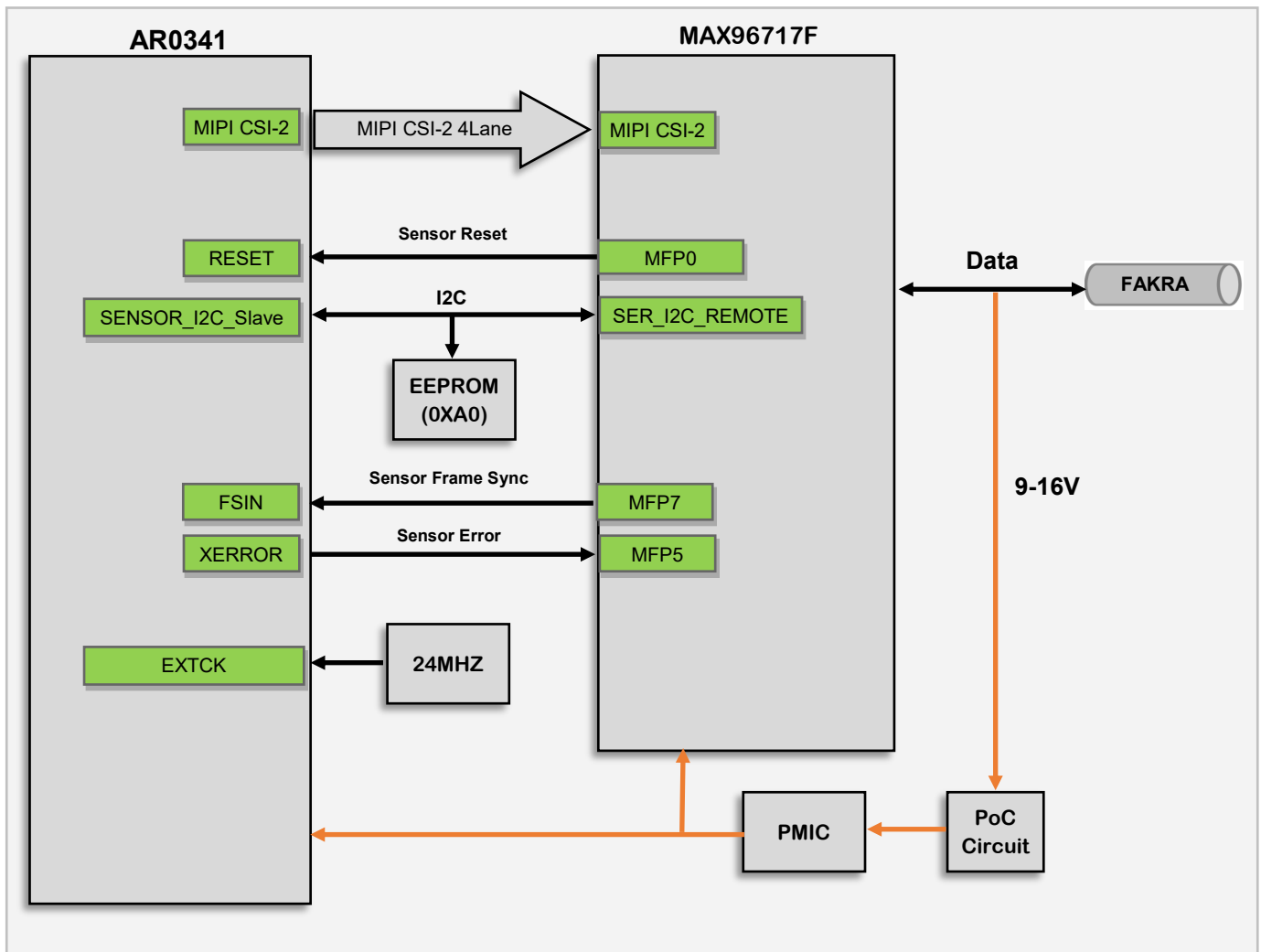
ISP	
Model	AR0341
I2C Address	0x20 (8bit address)
Frame Sync	Controlled by Max96717F MFP7
Error	Controlled by Max96717F MFP5
Reset	Controlled by Max96717F MFP0

Interface Circuit Diagram





BLOCK DIAGRAM



Block Diagram

- ※ The camera module does not have an ISP outputs RAW data. The backend need to configure an image sensor and 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



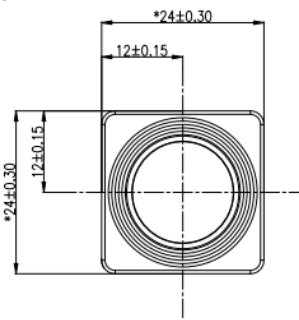


MODEL AND LENS

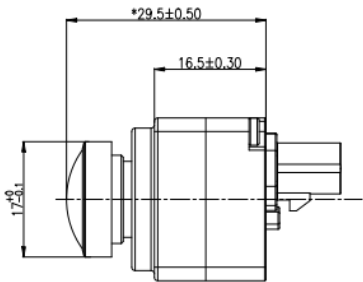
Model	HFOV	VFOV	F.No	EFL	Max Optical Distortion	Water-proof	Lens Mount
SG3-AR0341C-G2F-H190X	196°	160°	1.7	1.02mm	-134%	IP67	M12



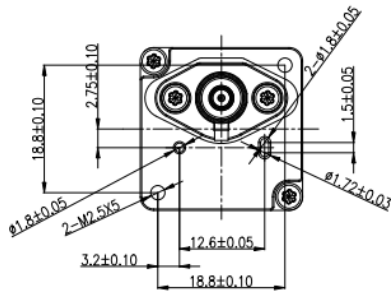
DIMENSIONS



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.



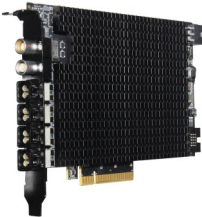
This icon indicates the imaging direction is positive.

Dimension





PLATFORMS SUPPORT

Platforms	Product Link
NVIDIA Jetson platforms 	Provide development driver package https://www.sensing-world.com/jetson_camera_ecosystem/ 
SerDes Camera to USB Converter	Compatible with UVC protocol, providing upper computer acquisition software https://www.sensing-world.com/USB_Converter/ 
CoaxCapture II GMSL Capture Card	Provide development driver package https://www.sensing-world.com/Coaxcapture_Card/ 

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





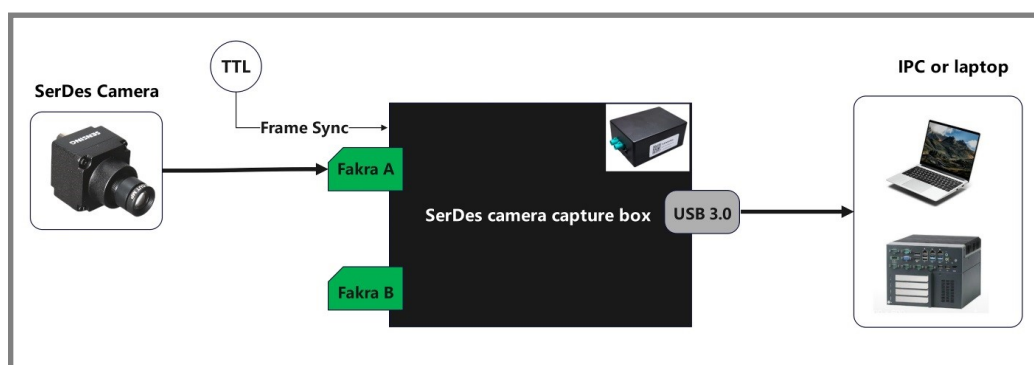
DEVELOPMENT KIT

◇ SerDes Camera to USB Converter



◇ KEY FEATURES

- USB 3.0 Super Speed support
- UVC compliance
- Provide customization services
- Power Supply by USB interface
- Weight: <300g
- Single Coax Cable transmit up to 20 meters PoC (Power over Cable)
- Support Windows only

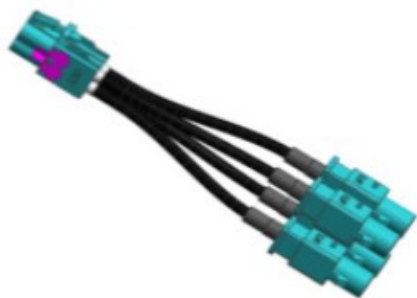




ACCESSORIES

◇ 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

