

SG1-OX01F10C-FPDLink-Hxxx



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1MP GMSLCAMERA

GENERAL DESCRIPTION

The camera is equipped with OmniVision CMOS image sensor OX01F10 and TI FPDLink III. 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 M12 lens that is focused and glued in our factory.



KEY PARAMETERS

Sensor	OmniVision 1.3MP OX01F10 RGGB
ISP	Built-in
Image Size	1/3.55 inch CMOS
Output Pixels	1280H*720V
Pixel Size	3.0um*3.0um
Frame Rate	1280*720@30fps
HDR Support	Yes
LFM	/
Output data	YUV422@8bit
Serializer	TI DS90UB933
Camera Interface	FPDLink III
Power Supply	9~16V POC
Current	<150mA@12VDC
Connector	Amphenol Fakra (Z Code)
Operating temp. range	-40~+85°C
Dimensions	W: 30mm, L:30mm, H:22.5mm
Weight	<50g



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
- FCC , CE and RoHS



Application

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



**HARDWARE SETTING**

Serializer	
Model	DS90UB933
I2C Address	0xB0(8bit address)

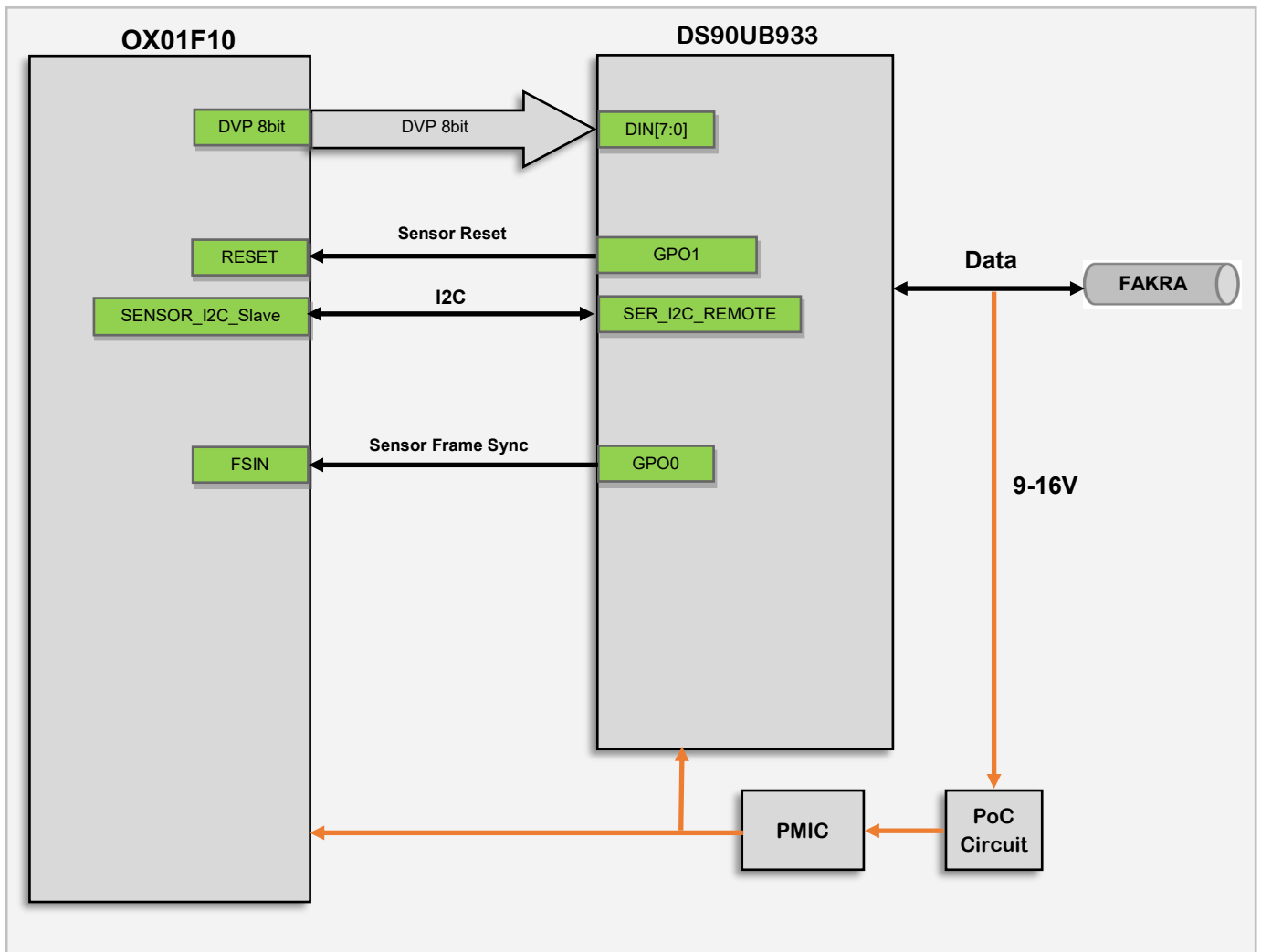
Sensor	
Model	OX01F10
I2C Address	0x6c (8bit address)
Frame Sync	Controlled by DS90UB933 GPO0
Reset	Controlled by DS90UB933 GPO1

Interface Circuit Diagram





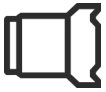
BLOCK DIAGRAM



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;



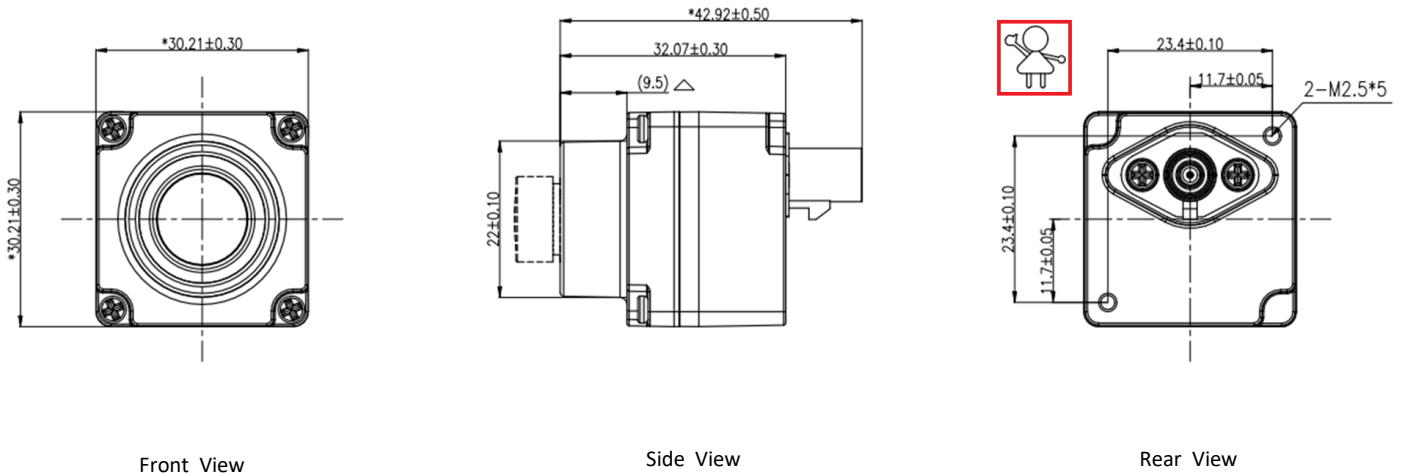


MODEL AND LENS

Model	HFOV	VFOV	F.No	EFL	Max Optical Distortion	Water-proof	Lens Mount
SG1-OX01F10C-FPDLink-H30A	30°	23°	1.8	6mm	-7.1%	IP67	M12
SG1-OX01F10C-FPDLink-H60F1	64°	25°	1.6	3.55mm	17.5%	IP67	M12
SG1-OX01F10C-FPDLink-H120X	125°	82°	2.1	1.28mm	-32%	IP67	M12
SG1-OX01F10C-FPDLink-H190X	196°	120°	2.0	0.93mm	-151.4%	IP67	M12




DIMENSIONS



Note:

△ There are two 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.

Dimension





PLATFORMS SUPPORT

Platforms	Product Link
<p>NVIDIA Jetson platforms</p> 	<p>Provide development driver package</p> <p>https://www.sensing-world.com/jetson_camera_ecosystem</p> 
<p>SerDes Camera to USB Converter</p>	<p>Compatible with UVC protocol</p> <p>https://www.sensing-world.com/USB_Converter</p> 
<p>CoaxCapture II GMSL Capture Card</p>	<p>Not supported</p>

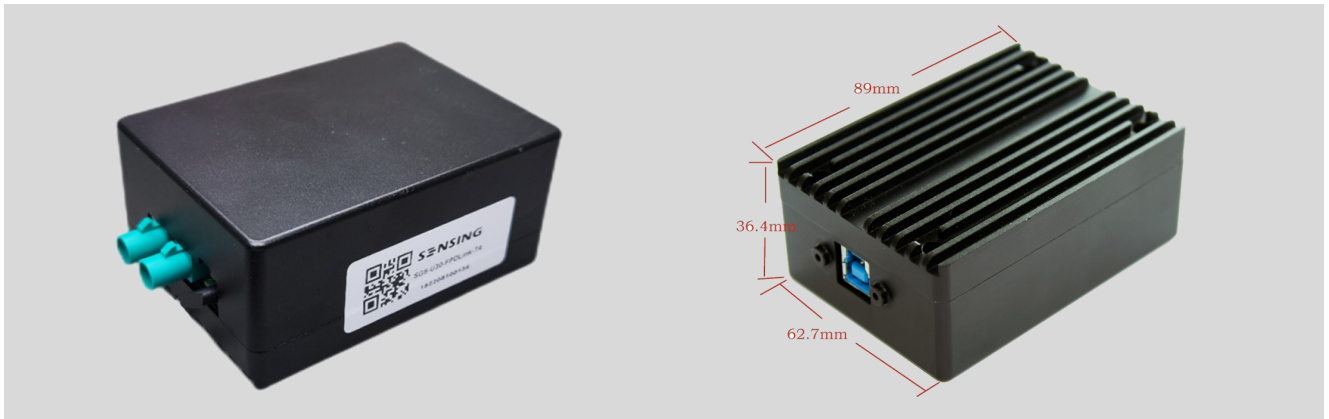
※ For development support, please contact Sales@sensing-world.com;





DEVELOPMENT KIT

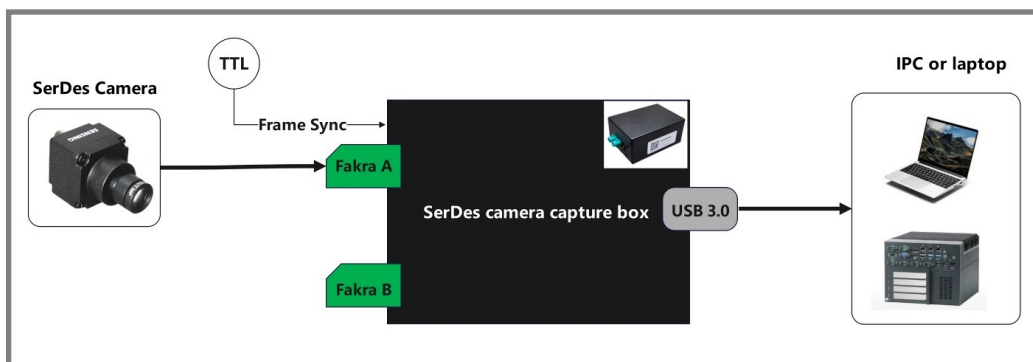
◇ SerDes Camera to USB Converter



- SG1-OX01F10C-FPDLink can connect to SG8-U30-FPDLink as a USB 3.0 camera .
- USB Camera Part Number: SG1-OX01F10C-FPDLink-U30-Hxxx (include 1xSG8-U30-FPDLink, and 1xSG1-OX01F10C-FPDLink)

◇ 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 1280*720@30fps
- Support Windows only



※ Support connected one camera only;

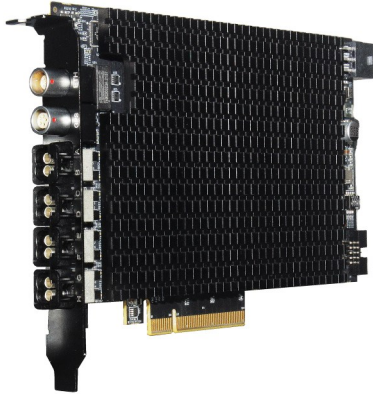




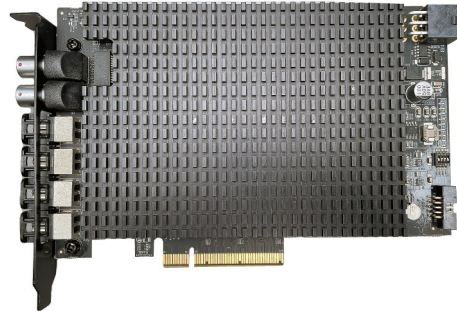
DEVELOPMENT KIT

◇ **CoaxCapture II GMSL Capture Card**

CCG3-8H



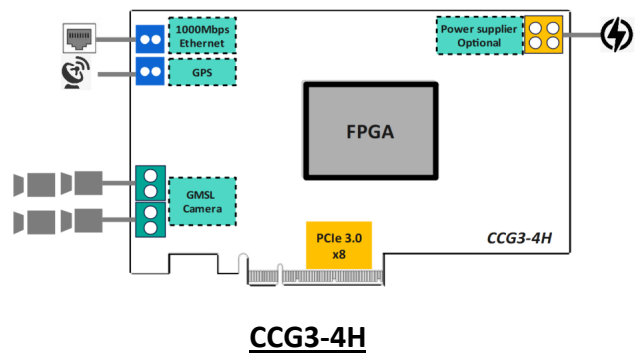
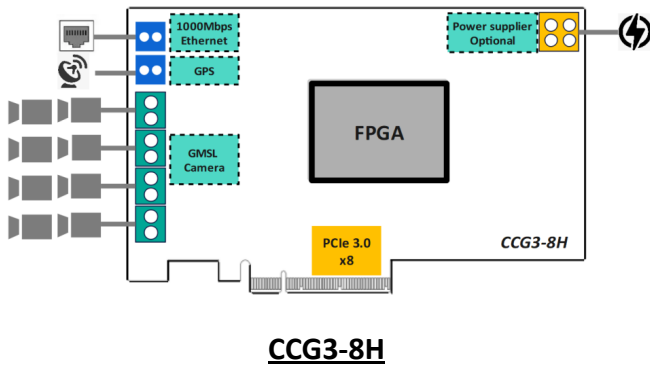
CCG3-4H



- SG1-OX01F10C-FPDLink can connect to **CCG3-4H/8H** .

◇ **KEY FEATURES**

- CCG3-8H at most can support connect 8* SG1-OX01F10C-FPDLink at the same time
- CCG3-4H at most can support connect 4* SG1-OX01F10C-FPDLink at the same time
- PCI-e Gen3*8lane support x86 architecture
- Support external trigger synchronization
- Support GPS Timing synchronization
- Support network PTP timing

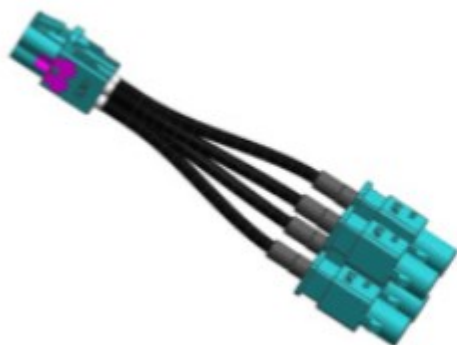




ACCESSORIES

◇ Coaxial Cable

Product Name	Order PN#	Specification
Mini-fakra Coaxial Cable 4-in-1 (TE)	T4JC-JS-ZZZZ-0500A	Mini-fakra, 4 in 1, 0.5m, Male to Female
Mini-fakra Coaxial Cable 4-in-1(Rosenberg)	R4PC-JS-ZZZZ-0500L	Mini-fakra, 4 in 1, 0.5m, Male to Female
Mini-fakra Coaxial Cable 4-in-1(Rosenberg)	R4JC-JS-ZZZZ-0500L	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	Oct.2020
Rev2	<ul style="list-style-type: none">→ Update connector description→ Update cable information→ Add block diagram→ Add supported platforms	Mar.2023





Contact Us

ShenZhen SENSING Technology 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

