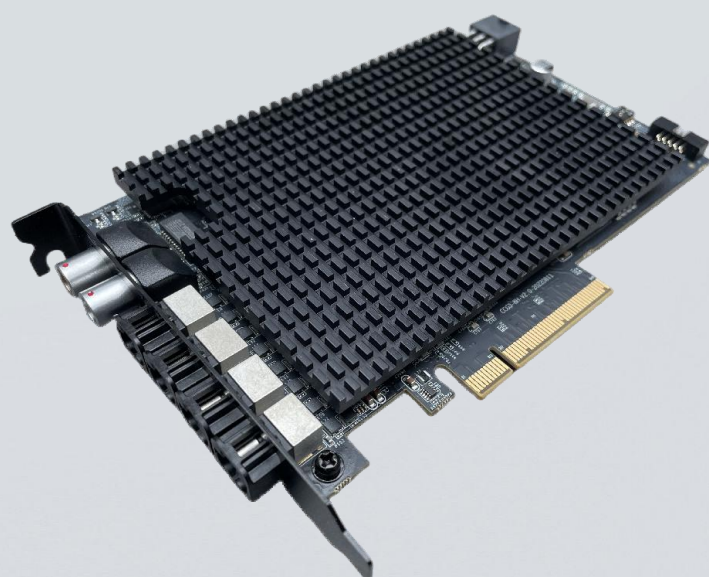# 【CoaxCapture】GMSL Video Capture Card (Gen2)

CoaxCapture II GMSL
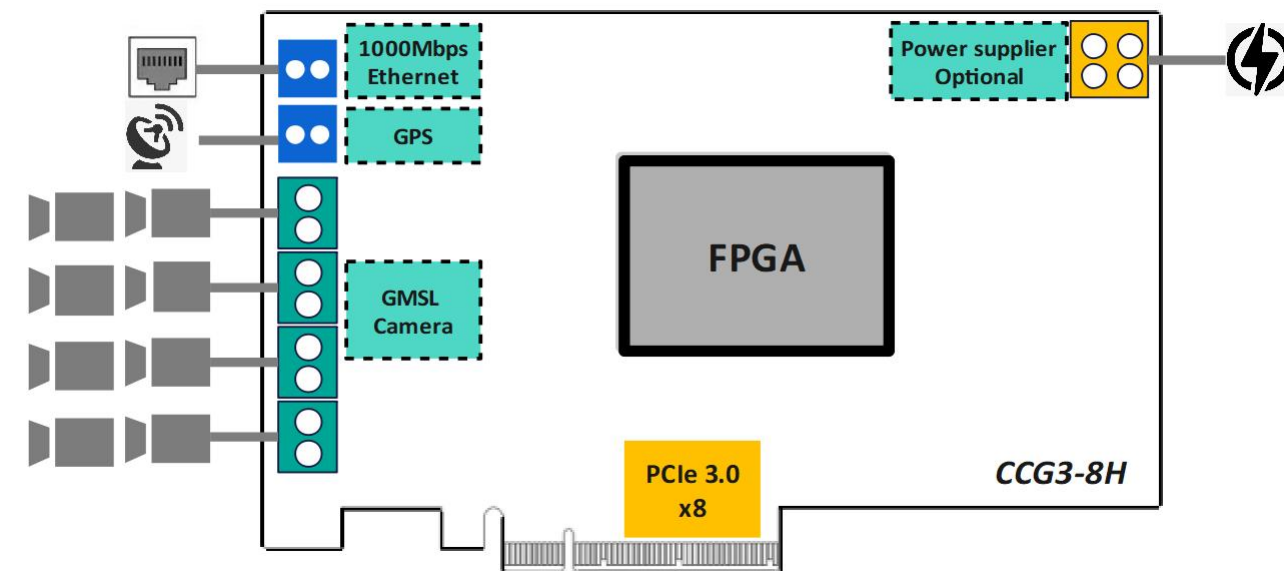
Version1.0

CCG3-4H

CCG3-8H

Product Introduction

【CoaxCapture】Gen2 Video Capture Card (Video Capture Card), it is a high-speed image product based on FPGA independently developed by ShenZhen SENSING Technology Co.,Ltd (hereinafter referred to as"SENSING"), and it is one of solutions of autonomous machine.
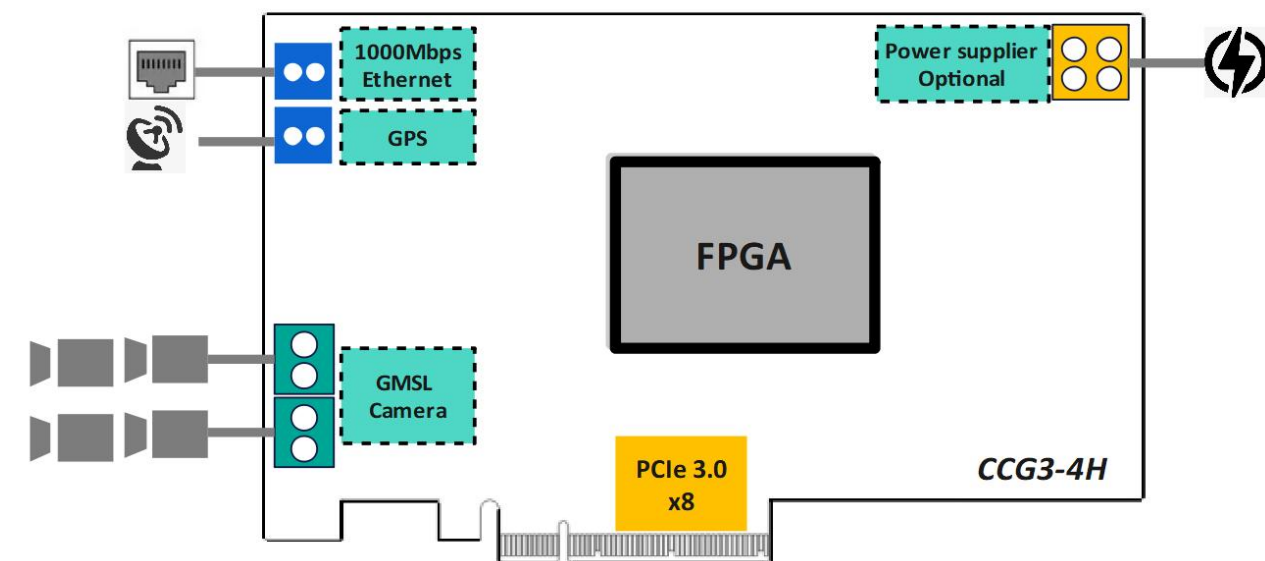
Compared with the Gen1, the speed and bandwidth of Gen2 Video Capture Card are improved double correspondingly due to the use of PCI-e Gen3 technology. The card can connect GMSL/GMSL2 cameras, and has the advantages of high frame rate, high speed, low latency, etc. It is widely used in autonomous machine, autonomous vehicle, data capture and other scenes.

✓ **CCG3-8H:**

- 8 GMSL cameras input, support up to 8 Mega Pixels@ 30 fps;

- PCI-e Gen3*8lane;

- Support external trigger synchronization;

- Support GPS Timing synchronization;

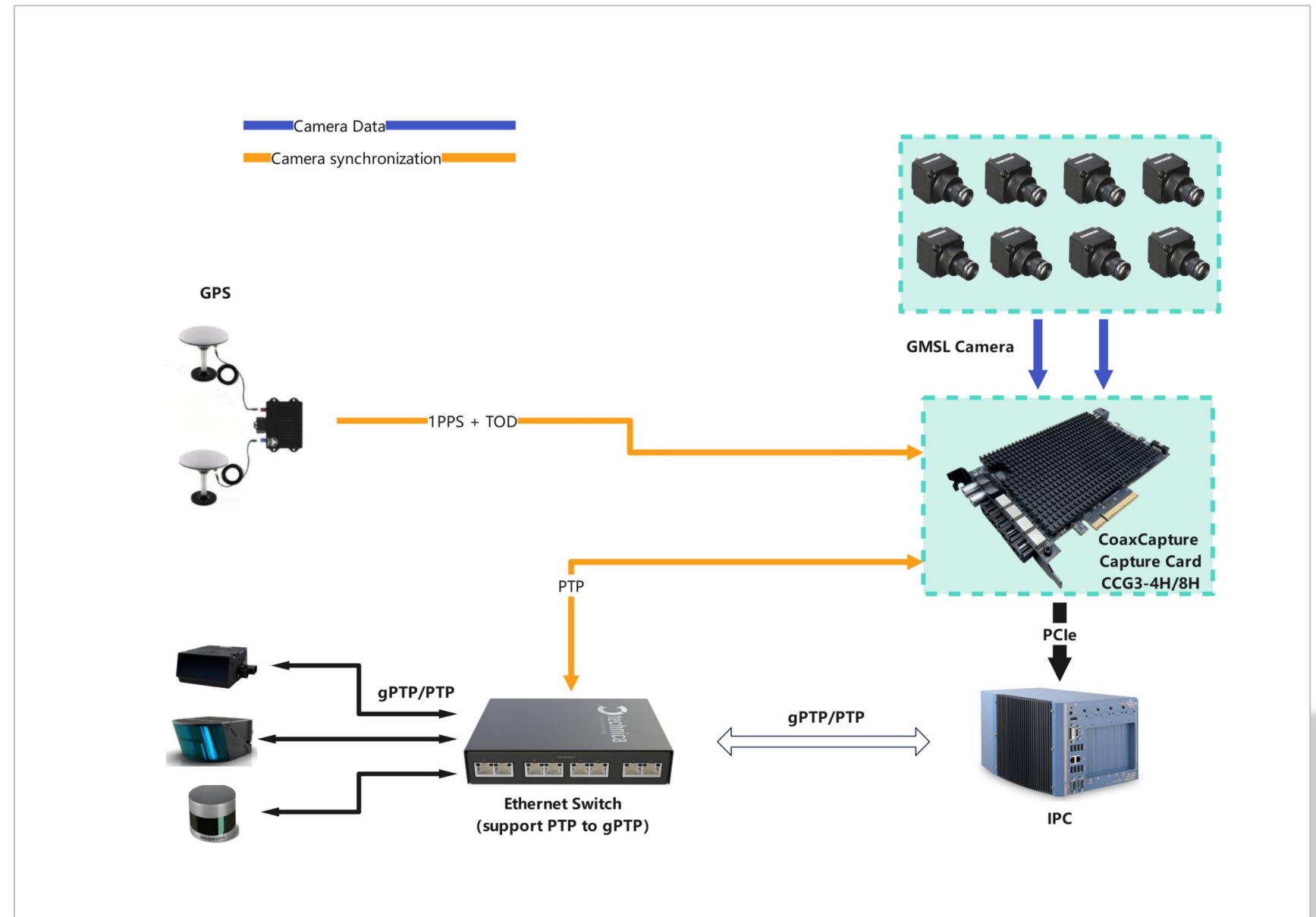- Support network PTP timing synchronization;

✓ **CCG3-4H:**

- 4 GMSL cameras input, support up to 8 Mega Pixels@ 30 fps;

- PCI-e 3.0 *8lane;

- Support external trigger synchronization;

- Support GPS Timing synchronization;

- Support network PTP timing synchronization;

2 Kinds Product Forms

CCG3-8H

CCG3-4H

Typical Applications

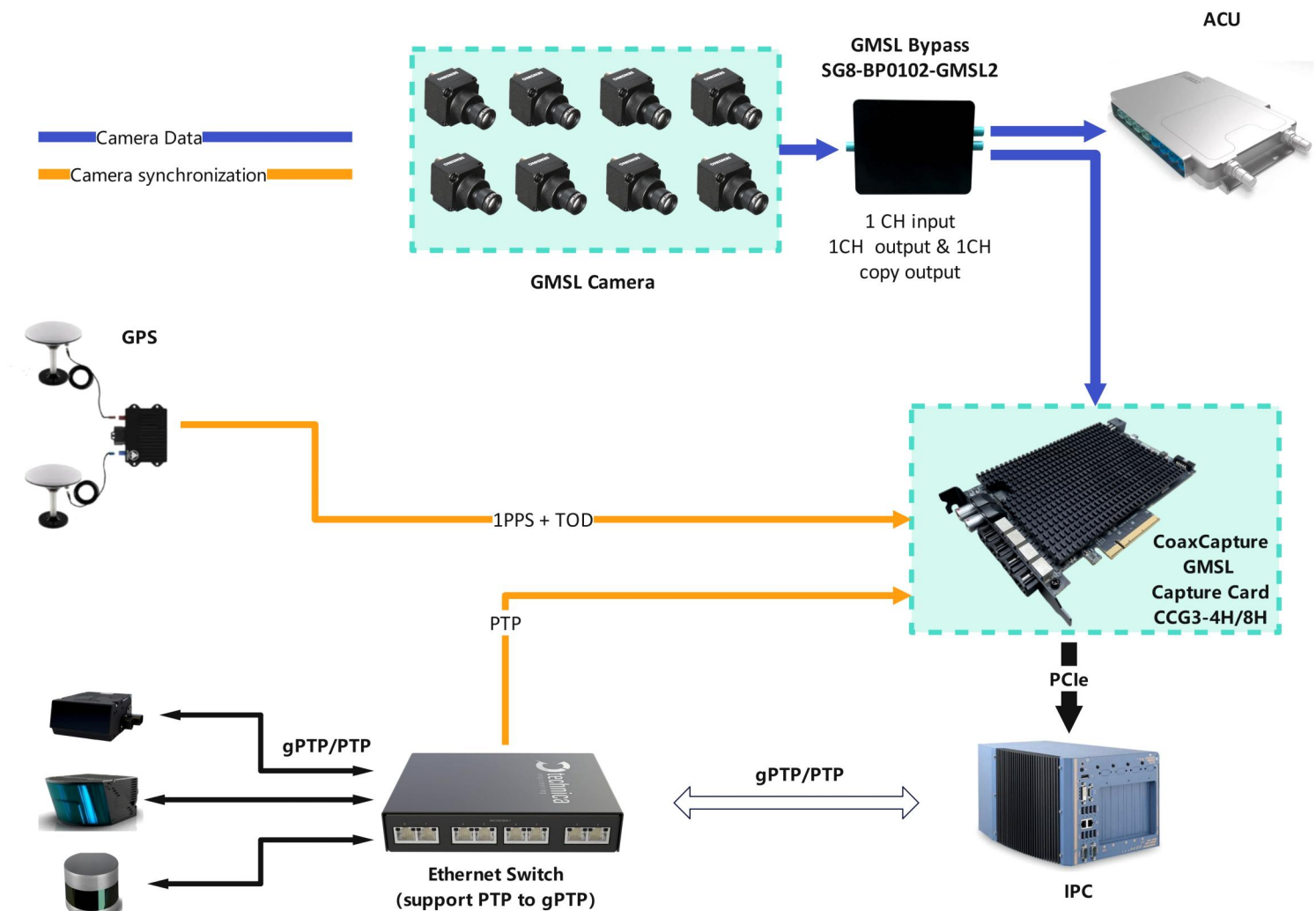✓ **Hardware solution of autonomous driving/machine**

- ■ 2 PCI-e slots support up to connect 16 GMSL cameras;

- ■ Max support 4K@30fps pixel input ;

- ■ PCI Express 3.0;

- ■ Support synchronous alignment of multiple cameras and lidars;

- ■ Support the function of timestamp in the capture card;

- ■ Ultra low latency;

- ■ Support fetching camera exposure parameter;

Typical Applications

✓ **Automatic driving vehicle data capture**

- 2 PCI-e slots support up to connect 16 GMSL cameras;

- Max support 4K@30fps pixel input ;

- Support ACU work of the original vehicle and data capture proceed synchronously;

- Support synchronous alignment of multiple cameras and lidars;

- Support the function of timestamp in the capture card;

- Use GMSL Bypass module realize GMSL camera input to ACU and video capture card synchronously lossless;

- Support RAW and YUV data camera;

ACU

GMSL Bypass
SG8-BP0102-GMSL2

Camera Data

Camera synchronization

1 CH input
1CH output & 1CH
copy output

GMSL Camera

GPS

1PPS + TOD

PTP

CoaxCapture
GMSL
Capture Card
CCG3-4H/8H

PCIe

gPTP/PTP

gPTP/PTP

Ethernet Switch
(support PTP to gPTP)

IPC

Specifications

Product Name

Product Name	【CoaxCapture】GMSL Video Capture Card (Gen2)
Model	CCG3-4H/CCG3-8H
Link to Buy	
Family	**Coaxcapture** II GMSL Series

Product Traits

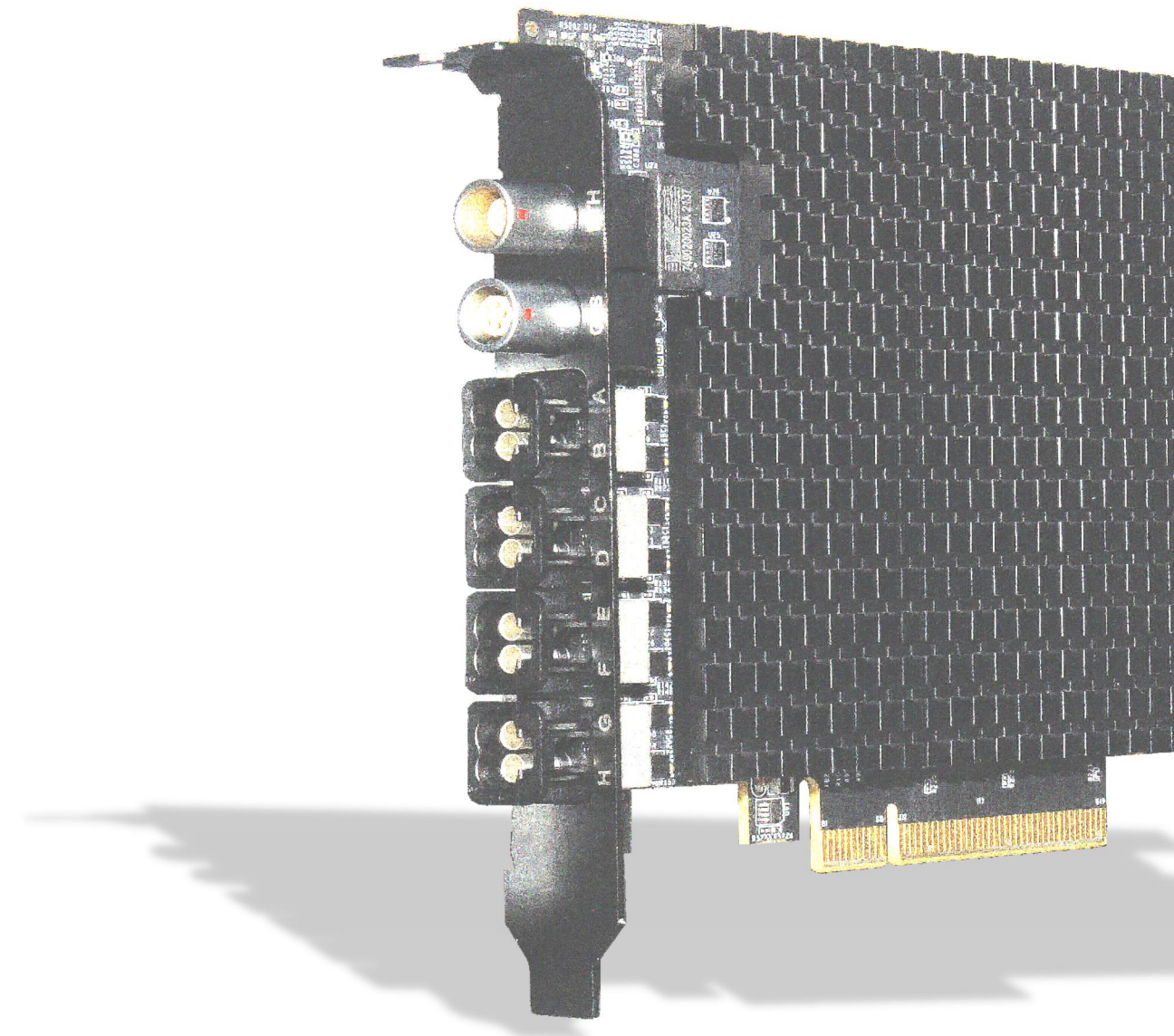| Processor	Xilinx ZU+ system processor
On Board Memory	6 GByte DDR4-RAM
Processor Board Interface	N/A
Ethernet Interfaces	1GigE: support PTP time Synchronization,Accuracy < 1ms
I/O Interfaces	TTL Trigger,GPS

IPC Interface

PC Bus Interface	PCI Express x8 (Gen 3)
PC Bus Interface	Up to 4800 MB/s (sustainable) Performance

Installation Structure

Dimensions	PCIe Standard height Half length card: 167.64mm length x 111.15 mm height
Approximate Weight	300 g
Power Consumption / Power Source	Voltage: 12 V, Typ. Current: 1 A
Operating Temperature	-20°C to 70°C
Storage Temperature	-40°C up to 80°C
Relative Humidity	5% - 90% non-condensing (operating), 0% - 95% (storage)
MTBF	5 yeas

Software

Software Drivers	Linux 64-bit,Ubuntu18.04/20.04
Software Tools	Documentation, SDK
Software API	V4L2 framework

Specifications

Camera Interface	
Standard	GMSL
Serializer supported	GMSL/GMSL2 links support MAX96705/MAX9295A/MAX96717F/MAX96717...
Connectors	Amphenol Min-fakra Dual MFK2252AW-001-TL30G-50
Cable Length	Amphenol /250mm MKA2FZ-302LL-FKMZ1-21-01
Power Output	Power Over Cable 4W/9V per cable
Camera Support	CCG3-4H: 4 cameras input CCG3-8H: 8 cameras input
Camera Resolution	1-8Mega pixel
Bit Depth	8 bit (YUV422), 8/12/16-bit (RAW)
Data Bandwidth	6 Gbps per cable
Camera manufacturer	SENSING technology(recommend)

Contact Us

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Company Website: www.sensing-world.com

Click the following website to contact the manufacturer

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

WECHAT   SKYPE   WhatsApp