

## GENERAL DESCRIPTION

OPNCAM8508 is a series of 3D ToF cameras based on OPNOUS Dolphin platform. This platform consists of ToF image sensor, VCSEL driver, ToF ISP developed by OPNOUS.

High integration, low power consumption, high precision and easy use are the key features of OPNCAM8508, which makes it ideal for 3D depth sensing applications.

OPNCAM8508 support either USB3.0 or MIPI as interface to host PC or application processor.

This camera comes with OPNOUS's powerful SDK, contains APIs, example code and depth display tool -- OPN ToF Viewer, it's a cross platform compatible software package.



## TYPICAL APPLICATIONS

- ✓ Face recognition and face motion tracking
- ✓ 3D reconstruction
- ✓ AR/VR
- ✓ Hand and finger tracking for gesture control and interaction with virtual objects
- ✓ Visual support for robot grippers
- ✓ People counting and motion analysis

**SYSTEM DIAGRAM**

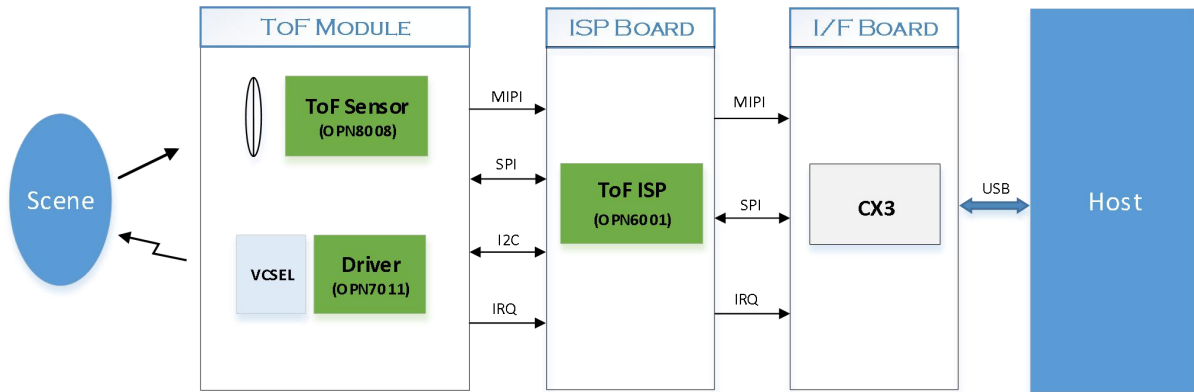


Figure 1. System Diagram of USB3.0 Output Camera

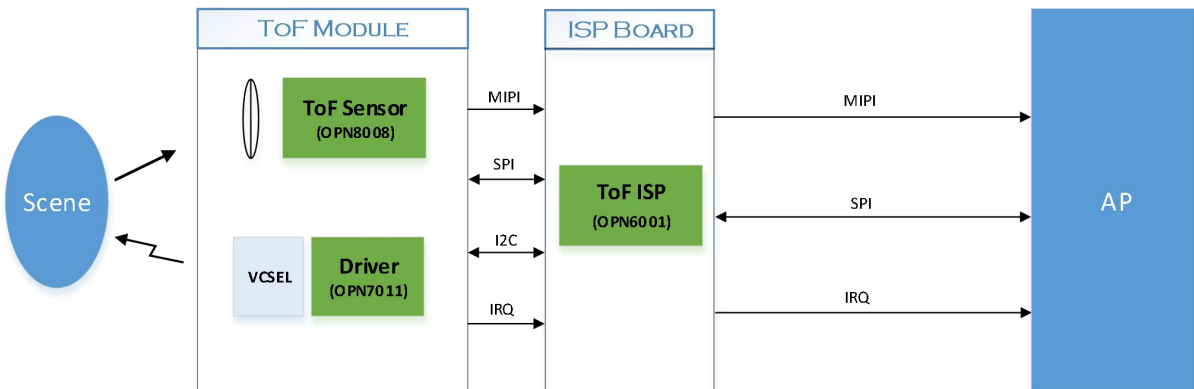




Figure 2. System Diagram of MIPI Output Camera

## KEY SPECIFICATIONS

Parameter	Description
Sensor	OPN8008D, global shutter
Resolution	320 * 240
Pixel size	15um
Sensor size	1/3"
Dimensions (L*W*H)	79.50mm * 23.20mm * 20.00mm/100mm * 54mm * 24.33mm
Frame rate	5 – 60 fps
Measurement range	0.15 – 2.0m
FOV	71.8°(H) * 56.5°(V)
Distortion	<2.5%
Illumination	940nm, 3W
Power consumption	340mW. Typ <sup>1</sup>
Depth accuracy	<=1% / <=1cm <sup>2</sup>
Interface	USB3.0/MIPI

1. Typical application, room temperature, 5fps, >85% reflection chart.
2. Dark room, >85% reflection chart.

### ORDERING INFORMATION

	Part Number	Resolution	Range	IR Filter	FoV	Interface
	OPNCAM8508C/197-1MA-UA	320 x 240	1m	940nm	72 x 55	USB 3.0
	OPNCAM8508C/297-1MA-UA	320 x 240	2m	940nm	72 x 55	USB 3.0
	OPNCAM8508C/197-1MA	320 x 240	1m	940nm	72 x 55	MIPI
	OPNCAM8508C/297-1MA	320 x 240	2m	940nm	72 x 55	MIPI

**DIMENSIONS**

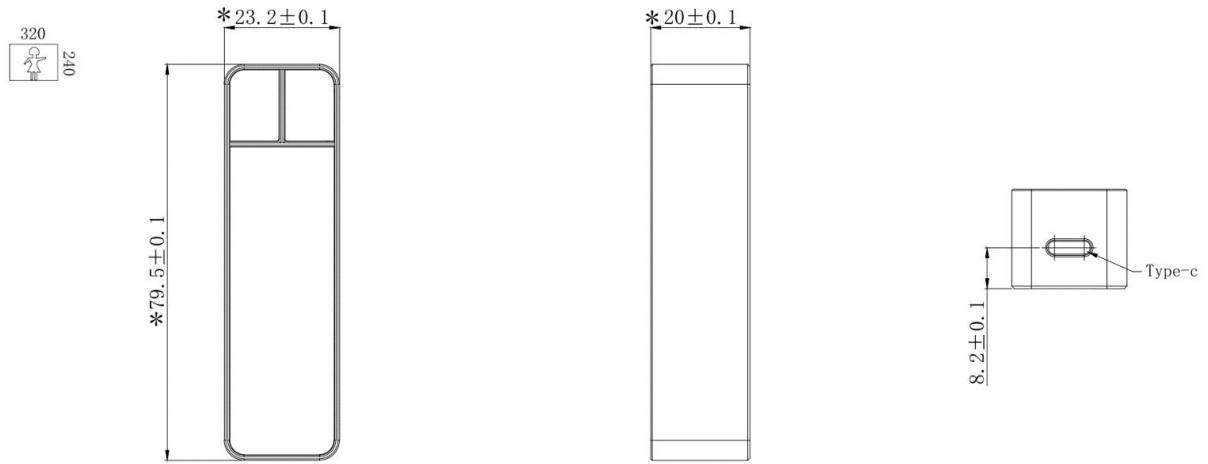


Figure 3. Dimensions of USB3.0 Output Camera

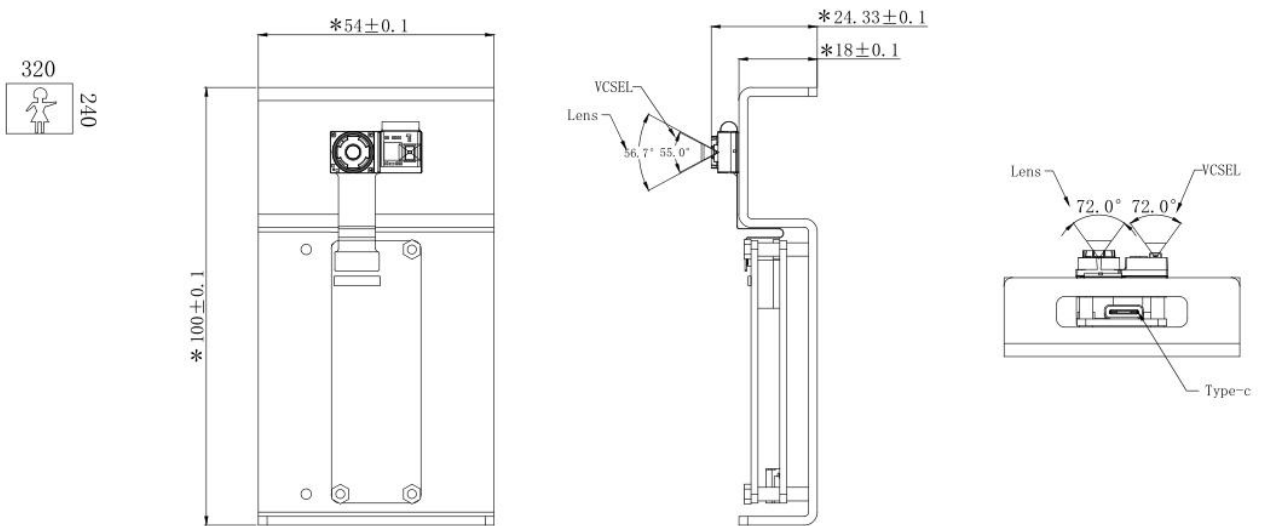


Figure 4. Dimensions of MIPI Output Camera

## REVISION HISTORY

Revision	Date	Description
V1.0	2020/4/12	Initial revision.

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