



## Comparative Study of Various 3D Depth Cameras

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**Abstract**—A number of review or survey articles have previously appeared on act recognition where either vision sensors or inertial sensors are used individually. Considering that every sensor modality has its own limitations, during a number of previously published papers, it's been shown that the fusion of vision and inertial sensor data improves the accuracy of recognition. This survey article provides an summary of the 3D Sensors Commonly Leveraged in ROS Development where both vision and inertial sensors are used together and simultaneously to perform act recognition more effectively. The thrust of this survey is on the use of depth cameras and inertial sensors as these two sorts of sensors are cost-effective, commercially available, their specification, effect and more significantly they both provide 3D act data. an summary of the components necessary to realize fusion of knowledge from depth and inertial sensors is provided.

**Keywords**—Augmented reality, 3D Depth Cameras

### I. INTRODUCTION

Gaming, virtual e-Commerce, 3D online education: Augmented Reality (AR) applications with three-dimensional depth sensors link the important with the digital world and are strongly demanded. Infineon Technologies AG and pmdtechnologies developed a 3D depth sensor supported the Time of Flight (ToF)-technology which outperforms other solutions within the market and aims for target applications that provide a wider spectrum of innovative consumer usability. The 3D sensor market in smartphones for rear side cameras is predicted to get older to quite 500 million units per annum until 2024. The new chip allows the mixing into miniaturized camera modules, accurately measuring depth briefly and long-range for AR while meeting low power consumption requirements with quite 40 percent power saving on the imager. Furthermore, seamless augmented reality sensing experiences are being achieved, allowing high-quality 3D depth data capture up to a distance of ten meters, without losing resolution within the shorter range. Always-on applications like mobile AR gaming can greatly enjoy the tiny power budget required by the new sensor, and supply users with

longer playtime than ever. For applications like the 3D scanning for room and object reconstruction or 3D mapping for furniture planning and other design applications, the sensor allows doubling the measuring range beyond the present solution within the market.

Following is the types of 3D depth Sensors with their specifications.

### **1. Microsoft Kinect 2.0**



Microsoft has stopped supporting the adapter, which may affect the development of commercial applications such as motion gaming, but the generic depth detection solutions will prevail, and the Kinect V2 sensor will continue to be used for research purposes. The use of the Kinect V2 sensor in human gait analysis has increased in the last five years. In general, the Kinect V2 sensor has been extensively used for kinematic gait analysis [1] and the identification of normal and pathological gait [2]

**Type:** Time of flight

**Depth Range:** 0.5 to 4.5 m

**3D Resolution:** 512 x 424

**RGB Resolution:** 1920 x 1080

**Frame Rate:** 30 fps

**Latency:** 20 ms minimum

**FOV:** 70° H, 60° V

**Physical dims:** ~250x70x45 mm (head)

**Interface:** USB 3.0[3]

### **2. Microsoft Azure Kinect**



Azure Kinect is a cutting-edge spatial computing developer kit with sophisticated computer vision and speech models, advanced AI sensors, and a range of powerful SDKs that can be connected to Azure cognitive services. Using Azure Kinect, manufacturing, retail, healthcare, and media enterprises are leveraging spatial data and context to enhance operational safety, increase performance, improve outcomes, and revolutionize the customer experience.

**Type:** Time of flight

**Depth Range:** 0.25 to 5.46 m

**3D Resolution:** Narrow Mode: 6540x576; Wide Mode: 1024x1024

**RGB Resolution:** 4096x3072

**Frame Rate:** 30 fps

**Latency:** 12.8 ms minimum

**FOV:** Narrow Mode - 75° H, 65° V; Wide Mode - 120° H, 129° V

**Physical dims:** 103mm(W) x 125.4mm(L) x 39mm(H)

**Operating Environment:** 10° - 25°C; 8%-90% relative humidity

**Interface:** USB-C[3]

### **3. ASUS XtionPro Live**



ASUS XtionPro Live sensors are based on the same PrimeSense infra-red technology. So all basic characteristics critical for full-body motion capture are generally the same

**Type:** Structured light

**Depth Range:** 0.8 to 3.5 m

**3D Resolution:** 640 x 480

**RGB Resolution:** 1280 x 1024

**Frame Rate:** 30 fps

**Latency:** ~1.5 frames

**FOV:** 58° H, 45° V

**Physical dims:** ~180x40x25 mm (head)

**Interface:** USB 2.0[3]

#### 4. ifm O3D303



Three-dimensional detection and evaluation The 3D camera, on the basis of PMD technology, detects scenes and objects at a glance in three dimensions. In contrast to laser scanners it does not require moving components and is thus robust and wear-free

**Type:** Time of flight

**3D Resolution:** Two resolution modes. 2x2 Binned mode is 176x132 and 352x264 is also supported

**RGB Resolution:** N/A

**Depth Range:** 0.3 to 8 m

**Frame Rate:** 25 fps

**Latency:** 1 frame

**FOV:** 60° V, 45° H

**Physical Dims:** 120x95x76 mm

**Interface:** Ethernet[3]

#### 5. ifm O3X100



Visual assessment of distance, level or volume

Reliable function due to time-of-flight measurement Illumination, measurement and evaluation in one unit Output of distance and grey values Integration by means of intuitive parameter setting software

**Type:** Time of flight

**3D Resolution:** 224 x 172

**RGB Resolution:** N/A

**Depth Range:** 0.05-3.0 m

**Frame Rate:** Frame Rate: 20fps (max value – depends on configuration)

**Latency:** 1 frame

**FOV:** 60° V, 45° H

**Physical Dims:** 80mm x 43.5mm x 21mm

**Interface:** Ethernet[3]

## 6. Stereolabs ZED



**ZED** is the world's fastest depth camera. Capture 1080p HD video at 30FPS or WVGA at 100FPS and get a crisp and clear image.

**Type:** Embedded stereo

**3D Resolution:** 2208 x 1242 max

**RGB:** 2208 x 1242 max

**Depth Range:** 1.5 to 20 m

**Frame Rate:** 15 fps at max res., 120 fps at VGA res.

**Latency:** 1 frame

**FOV:** 96° H, 54° V

**Physical Dims:** 175x30x33 mm

**Interface:** USB 3.0[3]

## 7. Carnegie Robotics MultiSense S7



The MultiSense S7 is a high resolution, high accuracy, 3D sensor that delivers real-time vertical and horizontal field-of-view coverage along with color information for every range point. S7 is the first commercially available camera with fully integrated, on-board processing capability and automatic

calibration. The S7 is capable of matching 11 million features per second, resulting in higher frame rates and more dense 3D range data.

**Type:** Embedded stereo

**3D Resolution:** 2048 x 1088

**RGB Resolution:** 2048 x 1088 max (7.5 fps)

**Depth Range:** 0.4 m to infinity

**Frame Rate:** 15 fps at 2048 x 544

**Latency:** 1 frame

**FOV:** 80° H, 45° V

**Physical Dims:** 130x130x65 mm

**Interface:** Ethernet[3]

#### **8. Ensenso N35-606-16-BL**



The Ensenso N35 3D cameras feature a compact aluminum housing with an integrated pattern projector, two 1.3 MP CMOS sensors and GigE interface. They are suitable for capturing static and moving objects. Power-over-Ethernet enables data transfer and power supply over very long cable lengths.

**Type:** Structured light

**3D Resolution:** 1280 x 1024

**RGB:** 1280 x 1024

**Frame Rate:** 10 fps

**Latency:** 1 frame

**FOV:** 58° H, 52° V

**Physical Dims:** 175x50x52 mm

**Interface:** Ethernet[3]

#### **9. SICK Visionary-T**



**Visionary-T** 3D vision sensors from **SICK** offer maximum flexibility for indoor use due to their innovative 3D-snapshot technology. The **Visionary-T** provides real-time depth information for each pixel – even for stationary applications – based on time-of-flight measurement.

**Type:** Time of flight

**3D Resolution:** 144 x 176

**RGB:** N/A

**Frame Rate:** 30 fps

**Latency:** 66 msec

**FOV:** 69° H, 56° V

**Physical Dims:** 162x93x78 mm

**Interface:** Ethernet[3]

#### **10. e-Con Systems Tara Stereo Camera**



Tara is a UVC-Compliant 3D Stereo camera based on MT9V024 stereo sensor from ON Semiconductor which supports WVGA((2\*752)x480) at 60fps over USB 3.0 in uncompressed format. This Stereo camera provides two synchronized sensor frame data interleaved side by side to the host machine over USB 3.0 interface. It also houses an inbuilt IMU chip which allows the user to read the 3D space inclination of the camera in real-time.

Tara can be used by customers to develop their Stereo Camera algorithms and also by customers who would want to integrate Stereo Camera in their product design.

e-con Systems 3D Stereo camera is ideal for applications such as Depth Sensing, Disparity Map, Point Cloud, Machine vision, Drones, 3D video recording, Surgical robotics, etc..

**Type:** Embedded Stereo Camera

**3D Resolution:** 752 x 480

**RGB:** N/A

**Frame Rate:** 60 fps

**Latency:** 1 Frame

**FOV:** 60° H

**Physical Dims:** 100x30x35 mm

**Interface:** USB 3.0[3]



### 11. Nerian SceneScan



SceneScan is Nerian's latest 3D depth sensing solution, and the successor to the popular SP1 stereo vision sensor. It relies on stereo vision and hardware-accelerated image processing to gain a 3D understanding of an observed area. Unlike conventional depth sensing methods, stereo vision is a passive technology that does not require the emittance of visible or invisible light. This is why it provides accurate 3D depth measurements even in challenging situations, such as in bright daylight, far-range measurements, multiple overlapping sensors, or even under water.

**Type:** FPGA Stereo Camera

**3D Resolution:** 1856 x 1856 max

**RGB:** 1856 x 1856 max

**Frame Rate:** 100 fps

**Latency:** 1 Frame

**FOV:** Variable

**Physical Dims:** 144x41x35 mm with Karmin2 stereo camera

**Interface:** USB 3.0 to cameras, Gigabit Ethernet to Host[3]

### 12. Nerian Scarlet 3D Depth Camera



Scarlet combines a **3D stereo camera and image processing system in one device**. Whether for static environments, or hard and critical real-time applications in dynamic environments, the Scarlet 3D stereo camera delivers exactly the image and depth data needed for a wide range of machine vision applications. It is designed primarily for agricultural, bin picking, pick and place, autonomous driving and autonomous vehicle applications.

**Type:** Embedded Stereo Camera

**3D Resolution:** up to 2432 × 2048 pixels (5 megapixels)

**Greyscale resolution:** up to 2432 × 2048 pixels (5 megapixels)

**Frame Rate:** up to 120 fps



**Depth Range:** 0.14m up to infinity

**FOV:** up to 80° horizontal; 95° diagonal

**Physical Dims:** 320 × 68 × 148 mm for 25 cm baseline; 217 × 68 × 161 mm for 10 cm baseline

**Interface:** 1G Ethernet, 10G Ethernet[3]

### **13. Intel RealSense Camera D415**



The Intel RealSense Depth Camera D400 Series uses stereo vision to calculate depth. The D415 is a USB-powered depth camera and consists of a pair of depth sensors, RGB sensor, and infrared projector. It is ideal for makers and developers to add depth perception capability to their prototype development.

**Type:** Active IR Stereo

**3D Resolution:** 1280 x 720 max

**RGB:** 1920 x 1080 max

**Depth Range:** 0.3 to 10 m

**Frame Rate:** 30 fps at max depth resolution; up to 90fps at lower depth resolution; 30 fps at max rgb res.

**Latency:** not noted

**Depth FOV:** 63.4° x 40.4° (+/-3°)

**RGB FOB:** 69.4° x 42.5° x 77° (+/- 3°)

**Physical Dims:** 99 mm x 20 mm x 23 mm

**Interface:** USB-C 3.1 Gen 1[3]

### **14. Intel RealSense Camera D435**



The Intel RealSenseD435 offers the widest field of view of all our cameras, along with a global shutter on the depth sensor that is ideal for fast moving applications. The Intel RealSense depth camera D435 is a stereo solution, offering quality depth for a variety of applications. Its wide field of view is

perfect for applications such as robotics or augmented and virtual reality, where seeing as much of the scene as possible is vitally important. With a range up to 10m, this small form factor camera can be integrated into any solution with ease, and comes complete with our Intel RealSense SDK 2.0 and cross-platform support.

**Type:** Active IR Stereo using Global Shutter Sensors

**3D Resolution:** 1280 x 720 max

**RGB:** 1920 x 1080 max

**Depth Range:** 0.105 to 10 m

**Frame Rate:** 30 fps at max depth resolution; up to 90fps at lower depth resolution; 30 fps at max rgb res.

**Latency:** not noted

**Depth FOV:** 85.2° x 58° (+/-3°)

**RGB FOB:** 69.4° x 42.5° x 77° (+/- 3°)

**Physical Dims:** 99 mm x 25 mm x 25 mm

**Interface:** USB-C 3.1 Gen 1[3]

### **15. Intel RealSense Camera D435i**



Intel RealSense depth camera D435i combines the robust depth sensing capabilities of the D435 with the addition of an inertial measurement unit (IMU). Adding an IMU allows your application to refine its depth awareness in any situation where the camera moves. This opens the door for rudimentary SLAM and tracking applications allowing better point-cloud alignment. It also allows improved environmental awareness for robotics and drones. The use of an IMU makes registration and calibration easier for handheld scanning system use cases and is also important in fields such as virtual/augmented reality and drones. When using the D435i, our Intel RealSense SDK 2.0 provides IMU data that is time stamped to align with our high quality depth data.

**Type:** Active IR Stereo using Global Shutter Sensors and IMU

**3D Resolution:** 1280 x 720 max

**RGB:** 1920 x 1080 max

**Depth Range:** 0.105 to 10 m

**Frame Rate:** 30 fps at max depth resolution; up to 90fps at lower depth resolution; 30 fps at max rgb

res.

**Latency:** not noted

**Depth FOV:** 85.2° x 58° (+/-3°)

**RGB FOB:** 69.4° x 42.5° x 77° (+/- 3°)

**Physical Dims:** 99 mm x 25 mm x 25 mm

**Interface:** USB-C 3.1 Gen 1[3]

### **16. Intel RealSense Tracking Camera T265**



With its small form factor and low power consumption, the Intel RealSense Tracking Camera T265 has been designed to give you the tracking performance you want straight off-the-shelf. Cross-platform, developer friendly simultaneous localization and mapping for all your robotics, drone and augmented reality rapid prototyping needs.

**Type:** Standalone inside-out 6DOF tracking and Visual SLAM solution

**Technology:** Technology: Visual SLAM, part of Intel RealSense Technology

**Processor:** Intel Movidius Myriad 2.0 VPU

**Cameras:** Two Fisheye lenses with combined 163±5° FOV

**IMU:** BMI055

**Latency:** not noted

**Output:** 6DOF pose @200Hz

**Mechanical:** 2 x M3 0.5mm pitch mounting sockets

**Physical Dims:** 108 mm x 24.5 mm x 12.5 mm

**Interface:** USB 3.1 Gen 1 Micro B (USB2.0 supported)[3]

### **17. Sense Photonics SenseOne**



Designed specifically with industrial applications in mind, Sense One combines range, resolution, frame rate, and reliability to facilitate robust object detection. Track pedestrians, detect obstacles in warehouses, and improve factory throughput with the best priceperformance of any production LiDAR. One million points per second of unmatched 3D clarity in a design without any moving parts allows users to deploy Sense One at large scale. Offered in 3 variants with pre-loaded operating modes to maximize performance in different use-cases.

1. Focus provides up to 65m range
2. Balanced optimizes FoV and range
3. Wide offers 95° vertical coverage

**Type:** Time of Flight

**Depth Range:** 0.5m-10m

**3D Resolution:** 0.28 degrees Horizontal x 0.28 degrees Vertical

**Range Accuracy:** +/- 0.5cm

**FOV:** 100x75, 80x60, 80x30

**Latency:** 50 ms

**Physical Dims:** 140 mm x 184 mm x 187 mm

**Interface:** Internet-GigE[3]

### **18. FRAMOS Depth Camera D435e**



FRAMOS D435e Industrial Depth Camera is an IP66-housed camera with M12 ethernet connectivity, based on the Intel RealSenseD430 Depth Module. FRAMOS D435e Industrial Depth Camera features a resolution depth of 1280px x 720px and 3µm x 3µm pixel size. The global shutter of the depth sensors allows for applications with fast motion, while the D415e provides higher accuracy through a higher baseline with rolling shutter sensors. The D435e is housed in anodized aluminum, and has an AR coated, scratch-resistant protection glass. The dustproof and waterproof housing makes the series ideal for industrial environments. The camera provides Gigabit Ethernet data transfer with GigE Vision compliance and Intel RealSenseSDK 2.0 compatibility.

**Type:** Active IR Stereo using Global Shutter Sensors

**3D Resolution:** 1280 x 720 max

**Max Range:** 10 meter

**Min Depth:** 200 mm

**Max RGB Frame Rate:** 30 fps

**Max RGB Resolution:** 1920 x 1080

**FOV Vertical:** 57

**FOV Horizontal:** 86

**IP Protection Class:** IP66

**Mechanical:** 2 x M3 0.5mm pitch mounting sockets

**Physical Dims:** 108 mm x 24.5 mm x 12.5 mm

**Interface:** Ethernet M12 (GigEVision)[3]

### **19. Orbbec Astra Mini**



Designed with a highly compact platform the Astra Mini is ideal for a wide range of settings, including gesture control, robotics, 3D scanning, and point cloud development for mobile devices ranging from schools to industrial environments, and even retail locations. Astra Mini is a bare 3D module (no productive housing) released by Orbbec towards our customers who want to build their standalone product.

**Type:** Structured Light

**3D Resolution:** 640 x 480 max

**RGB:** 640 x 480 max

**Depth Range:** 0.6 m to 5.0 m

**Frame Rate:** 30 fps

**Latency:** 1 frame

**FOV:** 73 D x 60 H x 49.5 V

**Physical Dims:** 80 x 20 x 20 mm

**Interface:** <2.4w data-preserve-html-node="true" USB[3]

## **20. Photoneo PhoXi 3D Scanner L**



Photoneo PhoXi 3D Scanner LScanner with high range especially useful for scanning of objects and bins of with a size of euro pallet. It found its use in vision-guided robotics projects especially in automotive. However thanks to its versatility it was used in a variety of industrial sectors, ranging from medical, logistics, agriculture, or heavy industries.

**Type:** Structured Light

**Depth Map/Point Cloud Resolution:** 0.8-3.2M Points

**Depth Range:** 870-2150 mm

**Frame Rate:** 2.5-5 fps

**Latency:** 1 frame

**FOV:** 1100 x 800 x 900 mm

**Physical Dims:** 77 x 68 x 616 mm

**Interface:** Gigabit Ethernet[3]

## **21. roboception rc\_visard**



The rc\_visard is the world's first 3D sensor that allows robots to perceive their environment in 3D and localize themselves in space.

**Type:** Stereo Camera

**3D Resolution:** 640 x 480 max

**RGB:** 1280 x 960 max

**Depth Range:** 0.2 m to 1.0 m for 65 Model, 0.5 m to 3.0 m for 160 Model

**Frame Rate:** 3-25 Hz

**Latency:** 1 frame

**FOV:** 61 H x 48 V

**Physical Dims:** 135 x 75 x 96 mm for 65 Model, 230 x 75x 84 mm for 160 Model

**Interface:** Ethernet[3]

## 22. duo3d DUO MC



The DUO MC is an ultra-compact, configurable stereo camera with a standard USB interface. Intended for use in consumer and industrial systems. The camera's high speed and small size make it ideal for existing and new use cases for vision based applications.

**Type:** Stereo Camera

**3D Resolution:** 752 x 480 max

**RGB:** 752 x 480 max

**Depth Range:** 0.23 m to 2.5 m for for M series

**Frame Rate:** 0.1-3000 fps Max

**Latency:** 1 frame

**FOV:** 170 W with 30 mm Baseline

**Physical Dims:** 57 x 30.5 x 14.7mm

**Interface:** 480 Mbps USB 2.0 Micro-B[3]

## 23. Zivid One+



Zivid One+ 3D detects target objects with single or multi-frame imaging, and have a low occlusion, optimized baseline with wide FOV overlap. The 2.3 MPixels image sensor is used to capture RGB color, 2D, and 3D, enabling your automation solution to reliably detect, inspect, select, classify, and



pick your target objects. Small, Medium, and Large Zivid One+ 3D color cameras are widely used in automation and robot cell applications. The low weight and small form factor enables both stationary- and robot mounting. A small, yet optimized baseline, gives you a flexible working distance from 30 cm to 3 meters.

Zivid One+ Medium covers 60 to 160 cm working distance, with full image overlap at 60 cm.

**Type:** Structured Light

**3D Resolution:** 1920 x 1200 (2.3 Mpixel)

**RGB:** Color mapped 1:1 pixel with 3D data

**Depth Range:**

Small: 300-800mm

Medium: 600-1600mm

Large: 1200-2600mm

**Frame Rate:** Up to 13 FPS burst

**Latency:** 80 ms

**FOV:**

Small: 164 x 132 @ 0.3m; 621 x 439 @ 1.0m

Medium: 433 x 271 @ 0.6m; 1330 x 871 @ 2.0m

Large: 843 x 530 @ 1.2m; 2069 x 1310 @ 3.0m

**Physical Dims:** 226 x 165 x 86 mm @ 2 KG Mass **Interface:** USB 3.0 (5m/10m/25m options)

24VDC[3]

#### **24. Zivid Two**



Zivid Two gives you exceptional 3D image quality lightning fast in an ultra-compact form-factor. Design fast, reliable pick and place robots cells capable of handling a wide variety of challenging objects and scenes.

**Type:** Structured Light

**3D Resolution:** 1944 x 1200 (2.3 Mpixel)

**RGB:** Color mapped 1:1 pixel with 3D data

**Depth Range:** 300-1200 mm (1500 mm max)

**Frame Rate:** Up to 13 FPS burst

**Latency:** 60 ms

**FOV:** 754 x 449 mm @ 0.7 m; 1426 x 894 mm @ 1.4 m

**Physical Dims:** 169 x 56 x 122 mm @ 880 Grams Mass

**Rating:** IP65

**Interface:** 10 GigE, 24VDC[3]

### **25. Arcure Omega**



Omega is a smart and robust stereoscopic camera that makes embedded computations to generate a disparity map, which can be easily turned into a distance map. With two sensors of 1,3Mpixels and 120° field of view, Omega provides metadata and the disparity map to the user, with a configurable resolution and raw images up to 20 frames per second. Omega is the most robust 3D sensor for outdoor applications with numerous field experiences in mining, construction, industry, steel mills, agriculture activities. This device is ideal for your applications such as robot vision, autonomous vehicle, terrain mapping, navigation and object classification.

**Type:** Stereo

**Rating:** IP69K

**3D Resolution:** 1280x1024 pixels

**RGB:** 1280x1024 pixels

**Depth Range:** Min: 30 cm; Max 50 m

**Frame Rate:** 60 fps max full frame

**Latency:** 6600 LSB10/(Lux.s)

**FOV:** 120 (h) x 90 (v)

**Physical Dims:** 200 x 83 x 79 mm @ 1.2 KG mass

**Interface:** 0.4 GB Ethernet.[3]

### **26. Basler ToF camera**



The Basler ToF camera is a 3D camera that functions based on the Time-of-Flight principle. It comes delivered fully calibrated with integrated optics and a GigE interface. It captures the spatial dimensions of scenes and objects instantly and entirely without moving components as laser scanners for example. That makes the ToF camera more robust and less susceptible to interference.

The measurement principle is based on the time the light needs to travel from the light source to the object and back to the camera; the further the distance, the longer the time taken. Both light source and image acquisition are synchronized in such a way that the distances can be extracted and calculated from the image data.

**Type:** Time of flight

**3D Resolution:** 640x480

**RGB:** N/A

**Depth Range:** 0.5 to 0.8 m

**Frame Rate:** 20 fps

**Latency:** 1 frame

**FOV:** 57° H, 43° V

**Physical Dims:** 141.9 x 61.5 x 68.4 mm

**Interface:** GigE[3]

## 27. MYNT EYE



MYNT EYE provides a quick response continuity rate while the platform stays in motion. For navigation or volumetric scanning, in poorly lit areas, the IR components can offer consistent secondary depth information, creating flexibility. Obstacle avoidance requires continuity and a high fill rate. Drones and similar platforms with high mobility and lightweight that can change movement direction quickly benefits from MYNT EYE's 60 FPS depth map and a wide field of view, covering more area and variables with reliable depth information. Comparing to a multi-sensor module solution covering the same area, the lightweight MYNT EYE produces a higher definition depth map with minimal distortion through a global shutter.

**Type:** Stereo Camera

**3D Resolution:** 752x480

**RGB:** N/A

**Depth Range:** 0.5 to 18 m



**Frame Rate:** 60 fps

**Latency:** 1 frame

**FOV:** 146° D, 122° H, 76° V

**Physical Dims:** 141.9 x 61.5 x 68.4 mm

**Interface:** USB 3.0[3]

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