

Underwater AI-D Depth Camera

The All-in-One Spatial Underwater AI Camera with a “Sense of Distance” .

Product Features

- **Bionic Vision:** Perceives the underwater world like a human
- **Vision Hub:** The ultimate camera for underwater robotic vision
- **Smart Navigation:** Supports SLAM / Obstacle Avoidance / Positioning

Application Scenarios

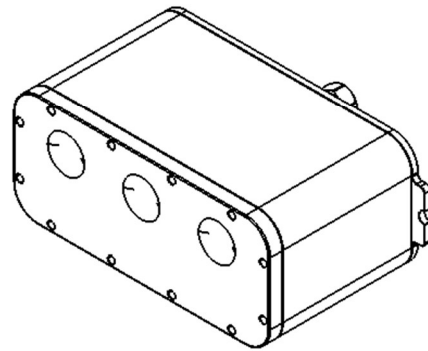
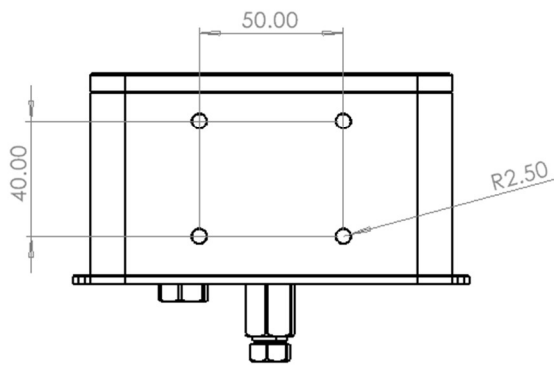
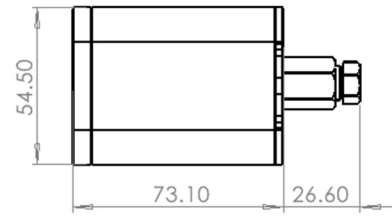
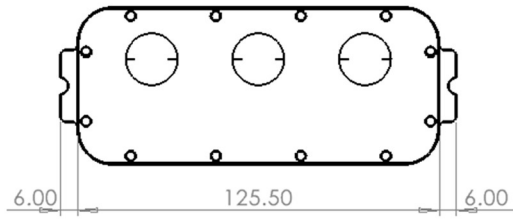
- Visual Navigation for ROV / AUV / USV
- Autonomous Obstacle Avoidance & Localization
- Object Recognition, Measurement, and 3D Sensing



Basic Specs

Depth Rating	300m
Weight in Air Water	1kg 0.4kg
Camera Model	OAK-D S2 PoE
Image Sensor	1* Sony IMX378 + 2*Omnivision OV9282
DFOV / HFOV / VFOV	IMX378 : 78° / 66° / 54°, OV9282 : 89,5° / 80° / 55°
Active Pixels	IMX378 : 12MP (4032×3040) 60 FPS, OV9282 : 1080P(1280×800) 120FPS
Effective Focal Length	IMX378 : 4.81mm, OV9282 : 2.35mm
F-number	IMX378 : 1.8 ±5%, OV9282 : 2.0 ± 5%
Focus	IMX378 : AF: 8cm – ∞, OV9282 : FF: 19.6cm – ∞
Sensor size	IMX378 : 1/2.3 inch, OV9282 : 1/4 inch
Pixel Size	IMX378 : 1.55µm, OV9282 : 3.0µm
Shutter	IMX378 : Rolling Shutter, OV9282 : Global shutter
Protocol	Ethernet
Power Supply	PoE, 3W~5.5W
Packing List	AI-D Underwater Camera *1, Standard 2m seawater-resistant cable, cable length customizable up to 70m, consult customer service for longer distances
Development	ROS / Python/C++

Main Dimensions



- Product specifications are subject to change without further notice. Please refer to our official website for latest information.

Wiring Instructions

Camera Pressure Housing

Main Control Housing



Camera Bulkhead Connector Wiring Diagram

Grey	GND
Grey/ White	+12VDC (LED Lighting Power)
Blue	GND
Blue/White	+12VDC (Camera Power)
Green	Rx-
Green/White	Rx+
Orange	Tx-
Orange/White	Tx+