

SubVIS | ORCA

SUBSEA VISUAL INTELLIGENCE SYSTEM

- Changing the game of subsea video

Imenco is now launching its first camera based on a new platform that is opening up for new possibilities for the subsea video industry. The platform, named Subsea Visual Intelligence System (SubVIS), represents a technological breakthrough for the subsea industry.

For the first time, live subsea video can be digitally transmitted via Ethernet without significant latency. The SubVIS platform is based on embedding a computer into the camera, making it ready for advanced image enhancement and Computer Vision. We have effectively made a dedicated computer especially designed for low latency video processing, based on Smart Phone technology. Full digital video transmission opens up an array of applications in the control room.

Similar to the Smart Phone technology, an important part of Imenco's philosophy is to ensure an open architecture to allow third parties to fully integrate these cameras into their control systems and to write software applications to increase the popularity and usefulness of the platform. This will allow you the freedom to tailor the package to suit your own specific demands, as well as integrating own video analysis function algorithms, image enhancement etc. on top of the core software.

The system opens up for the use of image metadata, which represents great advantages. Perhaps the most innovative and exciting feature is that subsea devices can be made to automatically communicate with each other. This allows for example the camera to tell the lights to reduce its intensity and deliver optimum level of light.



The first camera based on the SubVIS technology is called Orca. This is the Latin name of the Killer Whale – one of the most intelligent creatures in the ocean. This symbolises the change from the current analogue (only presumably digital) cameras used in the market today. The camera is designed as a ROV main camera and has been equipped with an excellent water correcting lens system for high image quality.

Imenco will keep developing the software applications as well as new camera models in the SubVIS range.



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Technical specifications

Functions

- ▶ HD Ethernet 1080p@60fps low latency video streaming
- ▶ Camera with an Imenco designed powerful Embedded Computer
- ▶ Ready for advanced image enhancement
- ▶ Software client with OSD
- ▶ Standard video streaming protocols RTSP / RTP
- ▶ HTTP commands for configuration and control



Technical data

- ▶ Ethernet: 10/100Mbit TP
- ▶ Ethernet video streaming protocols: RTSP/RTP, UDP, Unicast/Multicast
- ▶ Ethernet control protocol: HTTP
- ▶ Video compression: H.264 AVC
- ▶ Video resolution: 480p@30/60, 576p@25/50, 720p@50/60, 1080p@25/30/50/60
- ▶ Optical: Ivanoff-Rebikoff Water Correction Lens System
- ▶ Latency: 70 -100mS
- ▶ Built in 9-axis MEMS IMU sensor:
 - ▶ 3-axis gyroscope
 - ▶ 3-axis accelerometer
 - ▶ 3-axis magnetometer
- ▶ Internal Interfaces:
 - ▶ RS232 & RS485
 - ▶ 2 x GPIO

Dimensions

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|-----------------------------------|--|
| ▶ Main dimensions (ex conn.) | 5.5" Lens Diameter / 4.6" Body / 8.9" Total Length |
| ▶ Optical Zoom | 30x |
| ▶ Angle of view – wide (in water) | 73° - diagonal |
| ▶ Housing | Titanium |
| ▶ Depth rating | 6,000 msw |
| ▶ Standard connector | Subconn DBH13M or SeaNet |
| ▶ Power requirements | 24VDC (18 – 75) |
| ▶ Mass in air | 11.7 lbs |
| ▶ Mass in water | 8.15 lbs |