



Smart Visual Detection System



Technical Description

The SVDS camera system consists of: High Definition Video (HDV) and Long-Wave Infrared (LWIR) & thermal imaging camera pair, with on-board processing and storage. Each unit is housed robustly for maritime use. Various configuration options are available to ensure optimal visual coverage and ranges up to 360 degrees. If you have specific requirements, please contact enquiries@seiche.com.

General

- Modular customisable configurations
- Optional mounting systems
- Portable system deployed in hard case
- Fully marinised waterproof housing IP68 (pending certification)
- Hydrophobic glass
- Operating Temperature Range: -30°C to 70°C (pending certification)
- Shock: 1,500 g @ 0.4 msec (pending certification)
- Operating Voltage 19-30 VDC / supply voltage AC 110-240V
- Power consumption: Low power mode 20W Nominal 35W, Max Peak 135W
- On board GPU image processing 32GB on system storage
- On board Dual 4TB storage, main and encryption backup
- Networked removable storage up to 100TB
- Wi-Fi & satellite connectivity available on request
- GigE connectivity
- External triggers available 3.3V, 5V, 12V, serial optional protocol upon request
- Optional Workstations
- Built in 48 Channel GPS
- IMU orientation +/- 0.1°
- 360-visual scan with PTU

Software

- Mysticetus software compatibility
- Fast logging
- Auto detection (customised training dependant)
- Radar map visualisation with built in antenna for target location
- Automatic ranging – accurate target range estimation

RGB Camera: Standard RGB camera

(Optional upgrades):

- Sensor: 1/2.3 CMOS SONY IMX392
- Resolution: 2.4MP
- Array Size: 1920x1080
- Pixel Size: 3.45µm x 3.45µm
- Dynamic Range: 48dB
- Shutter Type: Global Shutter

Thermal camera:

- Thermal sensitivity: <40mK
- Pixel Pitch: 12 µm
- Full Frame Rate: 60 Hz
- Array size: 640 x 512
- f-number: 1.0
- Continuous Electronic Zoom: 1X to 8X zoom
- Spectral Range: Long-wave Infrared; 7.5 µm – 13.5 µm
- Scene Dynamic Range: to 140 °C (high) to 500 °C (low)

Applications include:

- Consistent 24-hour marine mammal monitoring
- Hazard detection, small fishing boat detection and vessel security and safety
- Accurate distance and ranging

Example of sperm whale fluke using Seiche's HD/IR camera

