


SEA.AI - BRAIN

Official presentation do be downloaded here: [Dame Award
Brain 2024_final.pptx](#)

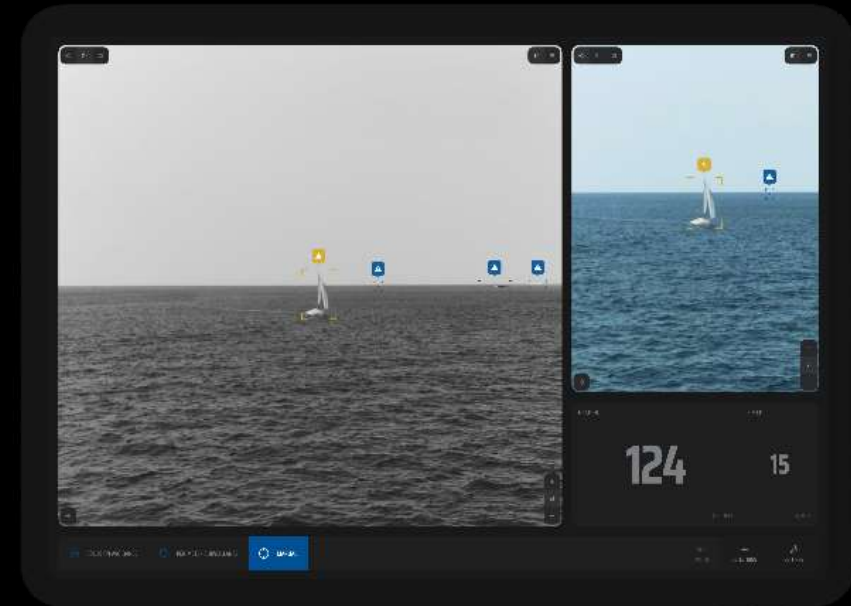
DAME DESIGN AWARDS 2024

SEA.AI - BRAIN


adding intelligence to the most commonly used cameras
in the marine industry

SEA.AI 

 **DAME** DESIGN AWARDS
2024



What is SEA.AI Brain?

SEA.AI 

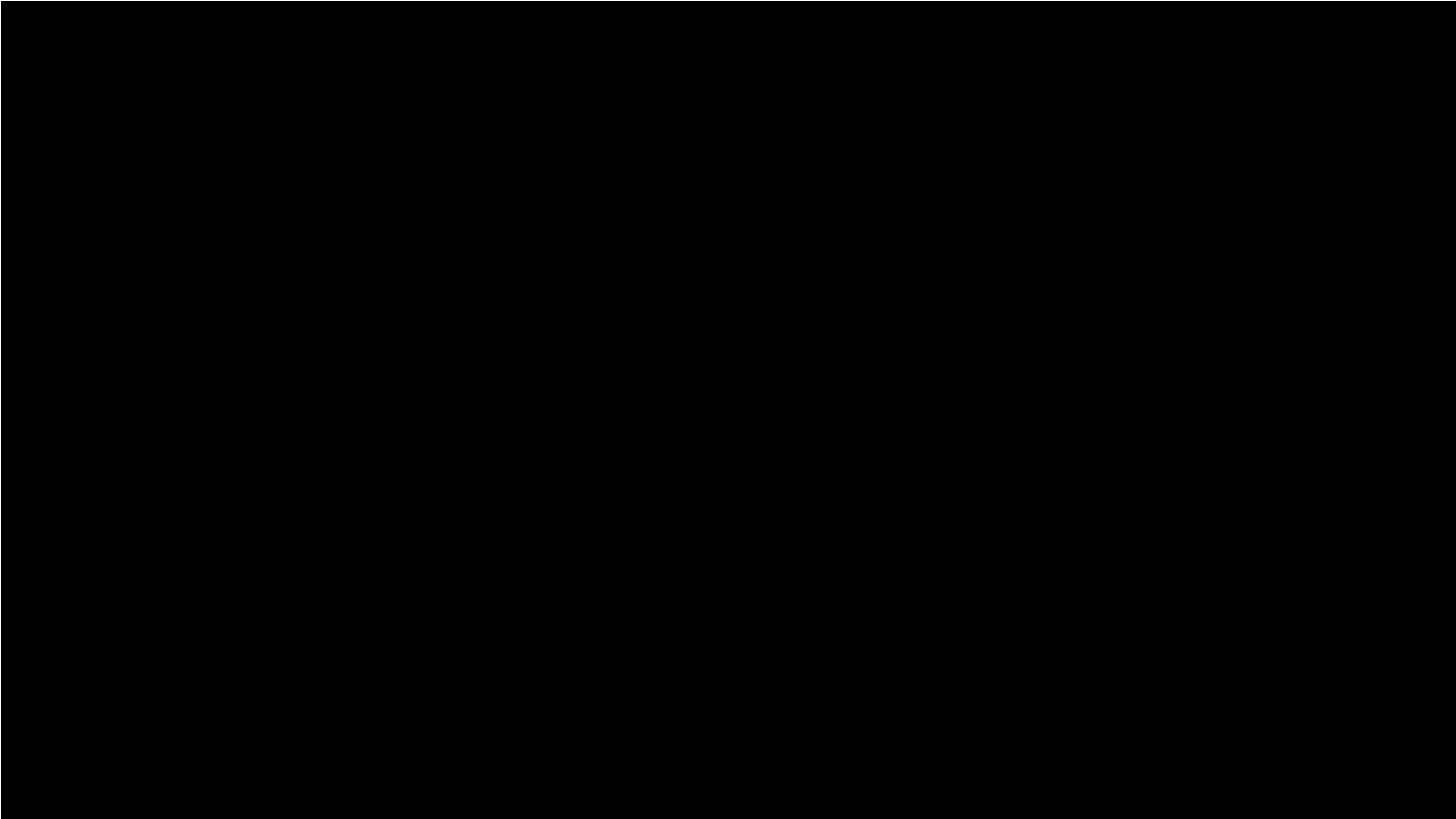


Standard Marine Cameras

SEA.AI Brain

Automatic Object Detection





SEA.AI is the industry leader in machine vision at sea to improve safety and situational awareness with cutting-edge machine vision technology (Artificial Intelligence). SEA.AI **detects, classifies and estimates distance** to objects and alarms users of potential dangers.

SEA.AI has a proven track record in all marine segments over 6 years.

The Brain will allow all users of existing cameras to receive all benefits of SEA.AI and will revolutionize the way those cameras are used.

How SEA.AI Brain works

SEA.AI has developed own algorithms that allow an AI to understand video streams and distinguishes water from non-water. This allows a computing unit to understand every frame and detect floating objects automatically.

DATABASE FACTS



Our proprietary database is the core of the system software and its integrated AI-powered object detection and recognition:

- >10 million annotated marine objects (thermal images and RGB images)
- 600+ installed systems over the last 6 years
- AI characterization of all objects along 100,000s of layers
- >400,000 nautical miles on-water experience around the world
- Continuously growing and improving (new object classes, e.g. icebergs, new geographic regions, new target segments,..)

SEA.AI



+



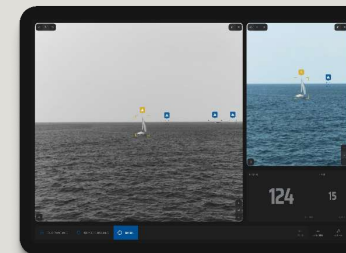
Cameras and processors with Machine Vision processor

- Comparing anomalies with neural network
- Regular over-the-air updates of newest AI, trained with new data for improved overall performance.
- No connection to other systems like AIS & Radar, nor internet connection necessary.



Intuitive UI / UX

- Augmented reality video stream combined with map view
- Intelligent acoustic and visual alarms
- Joystick control available
- Detection, classification and distance estimation
- Multi-device capability: Available on on-board computers, MFDs, smartphones & tablets as well as interface.



SEA.AI – BRAIN BENEFITS

- **Large installed base** of conventional marine cameras that **can easily be transformed** to intelligent cameras
- Automatic **object detection** of any floating objects day and night
- Acoustic **warnings** from hazards e.g. lobster pots, buoys,...
- Enhanced viewing experience with **digital image stabilization**
- Brain is compatible with most common **marine thermal cameras**
- SEA.AI App works with modern chartplotters / PC / mobile
- Easy to install
- Integration capabilities via **third party API**

SEA.AI vs. conventional systems	AIS	RADAR	SEA.AI Brain
Detecting ships / large boats	●	●	●
Detecting small boats	(●)	(●)	●
Detecting any floating objects			●



SEA.AI Brain with object detection on FLIR M364C vs regular FLIR M364C without SEA.AI



Portable devices:



Fully compatible with MFDs of largest manufacturers:



- ✓ Further integration possibilities into ECDIS via standard protocols. (ONVIF-S, NMEA, TTM/TLL messages, HTML 5)

EXAMPLE: SEA.AI Brain used on Flir M364C

Detection ranges and technical specifications*

Detection Ranges based on Flir M364C Model

Buoy, person in water, etc.

Dinghy, RIB, inflatable

Motorboat, sailboat

up to 190 m

up to 950 m

up to 2,500 m



Technical specifications	Power Supply Brain	Connectivity to Thermal Cam	AI Detection	Dimensions	Weight
SEA.AI Brain	12-24V DC	Ethernet (Onvif S)	Thermal	190x155x65	1.5 kg

* Detection range varies depending on camera model, weather conditions e.g. sea state, rain, fog., mounting height



“ Mackay Marine is excited about SEA.AI’s seamless and camera-agnostic integration, which will make AI-powered detection available to all.”

Will Deering
Senior Sales Engineer, Mackay Communications, Inc.



“ It is always exciting for POCHON SA, an integrator of electronic navigation equipment, to be involved in the launch of BRAIN by SEA-AI and to fully benefit from artificial intelligence in the service of safety at sea.”

François Hebert
Technical Director, Pochon SA



“ With SEA.AI Brain’s versatile platform, HANSE YACHTS AG is excited to bring a new era of smarter, safer yachting to our fleet of motor and sailboats.

Andreas Unger
Product Marketing | Product Manager – HANSE YACHTS AG



 **DANGER ALERT**

 **HAZARD**

220m 0kn



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