



KONGSBERG



AQUACULTURE MONITORING SYSTEM

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Monitoring fish and environment in aquaculture

Based on proven KONGSBERG technology

KONGSBERG from sensor to cloud for safe and efficient operation and data handling

KONGSBERG introduces an innovative operation and management support tool for the aquaculture industry providing unique insight into environmental conditions, fish behavior and welfare.

An enhanced sensor suite for environmental monitoring and advanced echo sounders for monitoring fish distribution vertically and horizontally and characterizing fish behavior 24/7.

Examples of sensors

- Cameras
- Echo sounders
- Oxygen
- Temperature
- Water current profiles
- Salinity, algae, turbidity

FUNCTIONALITY:

- Fish behaviour and distribution
- Integrated sensor display
- Real time- and historical data
- Status of individual feeding points
- Secure data Cloud storage
- Prepared for machine learning

K-Fins Operation Support

The sensor data is interpreted and visualized in the K-Fins operation support tool for maximum situational awareness at all times.

Benefits:

- Gain knowledge to optimize overall operation
- Save cost by optimizing feeding
- Position underwater cameras more efficiently
- Document fish behavior and welfare through automated analyses
- Data interpretation support and advisory from Kongsberg domain experts

The following operation support modules are available:

- K-Fins Environment – Secure optimal environment for the fish
- K-Fins Feed - Operator support for precision feeding
- K-Fins Welfare – Behavior and distribution for as a proxy of fish welfare
- K-Fins Birdseye - Supporting multiple farms in one tool

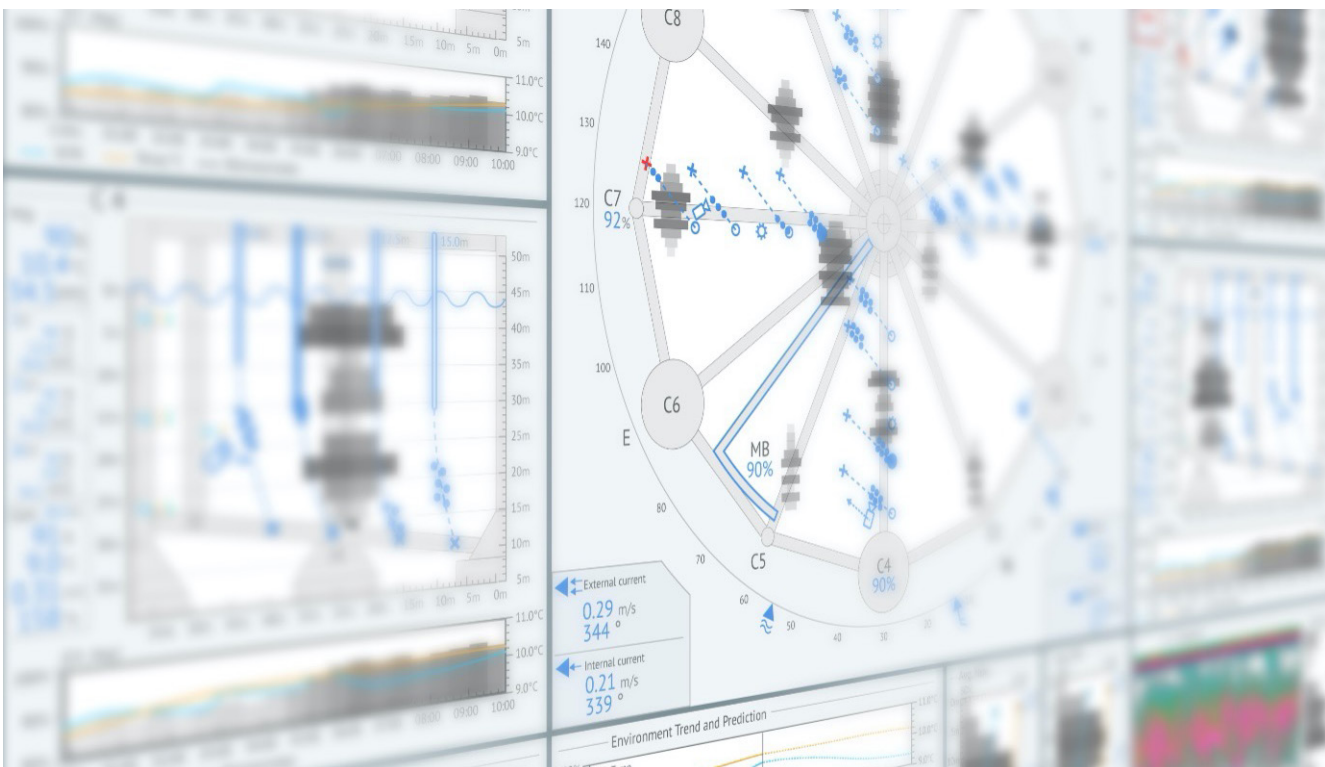


Image: K-Fins dashboards are configurable and tailored to the specific aquaculture facility

Cyber Security and Support

Our Global Customer Support works 24/7 to provide prompt responses, technical expertise and global assistance.

Kongsberg Edge Hardware is responsible for capturing sensor data from your assets on the Edge. This hardware contains several security features including a unique identity to ensure the integrity of the data and detect device tampering.

Once data is captured it is encrypted and sent to our data centres using our Global Secure Network. This network is marine certified by DNV-GL and Bureau Veritas.

