

Maritime Situational Awareness System (MSAS)



Maritime Surveillance Solution for Anti-smuggling and Counter-trafficking Enforcement

Globalisation has led to a significant increase in international trade as well as cross-border crime. International terrorism, sensitive sites protection, fisheries control, trafficking and drug smuggling are issues of concerns to the government. Authorities need to secure their territorial waters and know the identity and intentions of unknown targets in their ports, coasts, and waterways. Occasionally, authorities need to support search and rescue operations.

How It Works

Maritime Situational Awareness System (MSAS) is a scalable solution with an open architecture that has been deployed globally to provide an integrated platform with intuitive GUI, comprehensive tools and functions for coastal / shipborne surveillance and vessel traffic management operation. The technology offers a comprehensive range of tracking, detection and surveillance solutions with superior performance to improve situational awareness, including enhancing safety and security of coastal, maritime and sensitive sites.

Key Applications

- Anti-smuggling Enforcement
- Counter-trafficking Enforcement
- Maritime Security & Surveillance
- Ports, Harbours, Terminals & Infrastructure Protection
- Terrorism
- Integrate with Command Centre

Key Features

- Interface & transform commercial navigational radar to surveillance radar
- Detection of small targets
- Integrated real-time situational awareness and information sharing
- Recording and playback of radar tracks and camera footages for evidence and investigation
- Behavioural analytics to automatically identify suspicious vessel
- Tablet viewer interface for operator
- Marine Type Approval (DNV 2.4 Certified)
 - Product Quality Supervision & Inspection
- Support rapid threat assessment with auto surveillance features
 - Auto-Alarm
 - Auto-Camera Slew

Operational Concept



1 **MSAS Processing Unit**

- Marine Grade Design
 - ECDIS compliant
 - NMEA port integrated
- Marine Type Approval
 - DNV, ABS
 - IEC 60945
 - IEC 61162
 - IEC 61174
- Rugged Design
 - Wide temperature tolerance
 - Fanless
 - System view design

2 **Outdoor PTZ Camera**

- D1 resolution & 36x optical zoom
- Focus recall
- Vandal-proof
- IP66
- Stabiliser

3 **MSAS Surveillance Radar**

4 **UPS and Network-PDU**

- Compact
- Shock resistant
- Easy maintenance
- Temper-proof
- Display Monitor FHD

Tablet & Phone

1. Track-Before-Detect (TBD) Algorithm

- Intelligent signal processing technology
- Extensive radar capabilities
- Detects & tracks small targets in a challenging environment

2. Rapid System Reaction

- Intelligent processing with behavioural analysis
- Camera accurately tracks the threat in real time
- Enhances the detection & classification of targets in a heavily cluttered environment
- High performance MSAS processing unit

3. High-Performance Surveillance Radar

- Transforms Commercial Off-The-Shelf (COTS) navigational radar into high-performance surveillance radar
- Extends the current detection & surveillance capability

4. Post-event Reporting

- Detailed incident report
- Photos & videos record
- New variants adaptable to different mobile platforms

Platforms which MSAS can be installed on



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