

Sentinel IDS Ruggedised Expeditionary System

Low-logistic footprint underwater protection

Sentinel IDS Ruggedised Expeditionary System is engineered to deliver comprehensive underwater protection while maintaining a minimal operational footprint.



Sentinel IDS® Ruggedised Expeditionary System provides a 360-degree underwater exclusion zone with a detection radius of up to 1,000 meters for divers or UUVs and 1,500 meters for crewed underwater vehicles.

Sentinel processes data in real-time using advanced onboard algorithms that automatically detect, classify, and track multiple subsea targets—such as divers or autonomous drones—while intelligently filtering out background noise and marine life to provide a clear, actionable security picture.

Key Features

- Simultaneous In-band Active and Passive Sonar (SInAPS®) Technology
- Lighter sonar configuration for simple deployment.
- Ruggedised PDU and MIL-STD Laptop
- GPS module and antennas
- Batteries providing 8 hours of uninterrupted protection

Protecting

- Temporary operating bases
- Naval facilities
- Sporting events
- Commercial ports & harbours
- Critical National Infrastructure (CNI)
- Desalination plants & coastal power stations
- Wind farm & subsea cable infrastructure
- Bridges, dams, and other civil projects
- Ships, yachts & barges

Sentinel IDS Ruggedised Expeditionary System uses SInAPS® (Simultaneous In-band Active and Passive Sonar) a unique processing technology that allows the system to transmit active sonar pulses while listening passively at the same time. This dual-mode capability ensures that the sonar captures high-resolution imagery and acoustic signatures simultaneously, providing a "clearer" underwater picture than traditional systems.

The operator interacts with a specialized display that overlays real-time underwater tracking data onto a 2D digital chart of the protected area. The interface is designed to be intuitive, using clear visual icons and automated alerts to highlight potential threats without requiring the user to be a sonar expert.

Operators use the system to monitor a 360-degree exclusion zone, relying on the software to automatically detect and classify targets like divers or underwater drones. When a threat is identified, the system provides precise coordinates and trajectory data, allowing the operator to coordinate an immediate and effective security response.

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Specifications – Sentinel IDS Aluminium Sonar	
Sonar range	Up to 1,500 m
Diver detection range	Up to 1,000 m
Operational frequency	70 kHz
Bandwidth	20 kHz
Source level (dB re 1 µPa @1m)	206 dB
Acoustic cover	360°
Target bearing accuracy	Down to 0.35°
Target position accuracy	Within 1 m at 150 m range
Physical configuration	
Dimensions	432 x 330 mm (17 x 12")
Weight	35 kg
Power	Max 70 W

