

Vigilant FLS 600

Real-time 3D navigation

Vigilant FLS 600 a forward-looking sonar that detects obstacles within the water column and generates real-time 3D bathymetric maps. Situational awareness for both surface vessels and underwater vehicles. 



Vigilant FLS 600 monitors a 120° sector up to 1,000 m, automatically flagging hazards to ensure safe navigation in confined or shallow waters.

It has been designed to support a wide range of vessels including both unmanned and crewed vehicles fusing navigation data to produce precise coastal maps. Its class-leading range provides operators with maximum reaction time for obstacle avoidance.

Key Features

- Real-time 3D seabed mapping
- Automated collision hazard alarms
- Wide 120-degree field of view
- 1,000 m detection and 600 m mapping range
- Compact combined projector-receiver design
- Full autonomous system integration
- Open application programming interface (API) for simple integration

Applications

- Unmanned and crewed vessels
- Confined harbour and port manoeuvring
- Real-time hydrography
- Amphibious assault mapping
- Rapid environmental assessment
- Detects floating mines
- Ice detection for high-latitude operations
- Navigation in GNSS denied areas

Vigilant 600 FLS uses a patented, high-resolution architecture that maintains a 600 m 3D mapping range even in shallow water. Vigilant has a 30 x depth-to-range ratio surpassing the "depth-to-range" limitations of conventional FLS. Its ultra-efficient 50 W operational draw minimises power consumption to maximise vehicle endurance, providing vessels with significantly greater operational reach. Automated collision alarms and high-fidelity 3D terrain generation eliminate manual monitoring, allowing for safe, oversight of uncrewed platforms.

The Vigilant 600 interface presents a real-time, color-coded 3D visualization of the seabed and water column, overlaid with automated markers for navigational hazards. This intuitive display provides operators with immediate situational awareness.

Vigilant 600 can be deployed as a fully integrated navigation suite for bridge teams or as a modular remote sensor, delivering real-time telemetry to onboard systems or via satellite link to a shore-based Command and Control centre.

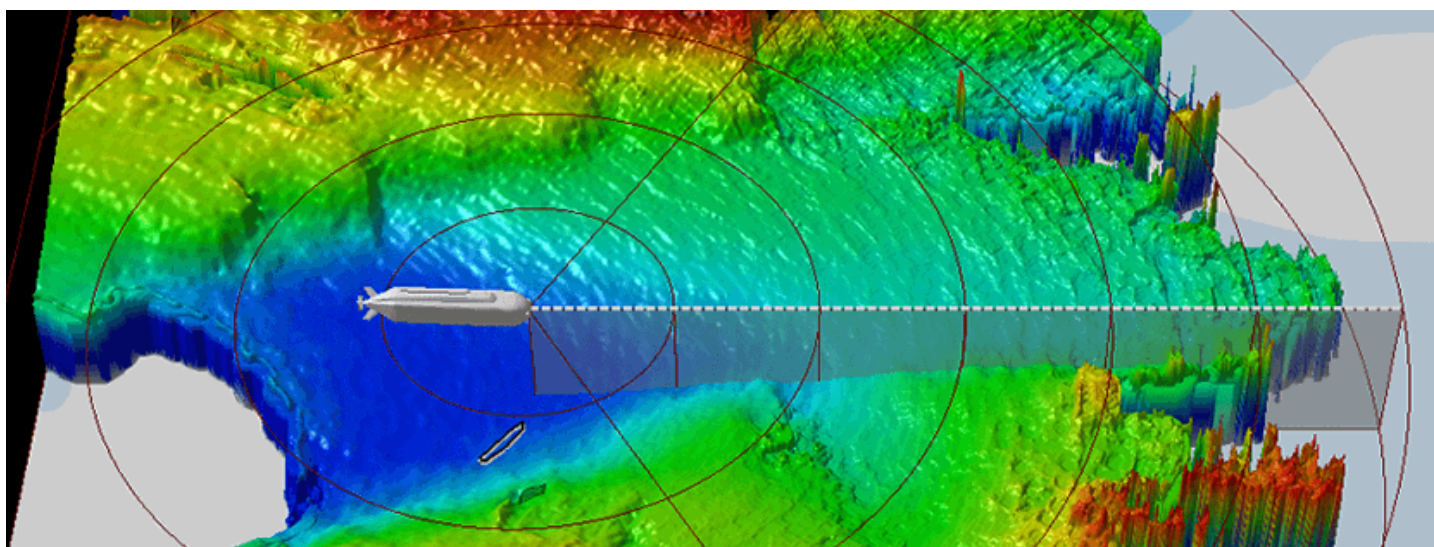
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Specifications – Vigilant FLS 600

Range (Depth mode / Sonar mode)	600 m / 1,000 m
Field of view	120°
Operational speed	Up to 25 knots
Bottom mapping ratio	Up to 30 times water depth to a maximum of 600 m ahead
Max depth detection	100 m (from sensor)
Angular accuracy	0.3°
Depth rating	50 m, 90 m or 600 m options

Physical Specifications – Vigilant FLS 600

Dimensions	300 mm x 270 mm dia.
Weight	50 m depth rated – 14.2 kg Weight in air (0.5kg Weight in water) 90 m depth rated – 17.5 kg Weight in air (4.0 kg Weight in water) 600 m depth rated – 22.8 kg Weight in air (8.6 kg Weight in water)
Power Operational/Max Peak	50 W / <150 W



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