


Solstice 3000

Multi-aperture sonar

Solstice 3000 is a multi-aperture sonar that takes side-scan to a new level of performance. Its unique design delivers high-resolution imaging and bathymetric data. Ideal for UUVs and ROTVs. 

Solstice MAS[®] provides a 200 m swath at an unrivalled resolution of 0.15° along-track. All of which is achieved whilst consuming only 18 W of power.

Specifically designed to support low-logistic AUV operations in very shallow and confined environments. Solstice bridges the gap between side-scan and synthetic aperture sonar. Solstice's class leading accuracy and resolution delivers actionable insights.

Key Features

- Ultra-high resolution, pixel-perfect images
- Co-registered bathymetry
- Multi-Ping, Multi-Look processing (MPML)
- Motion compensated geo-referenced images
- Multi-path suppression arrays
- Ultra-low power
- Real-time array calibration

Applications

- Mine-counter measures (MCM)
- Unexploded ordnance detection (UXO)
- Search and salvage (SAR)
- Hydrographic surveying
- Environmental and habitat monitoring
- Critical infrastructure protection and pipeline inspections
- Archaeological surveys

Solstice 3000 achieves an impressive Area Coverage Rate (ACR) of 1.6 km²/hr by maintaining a wide, 200-meter swath while traveling at speeds of up to 6 knots. The system utilizes real-time motion compensation to eliminate distortions from pitch, roll, and yaw. This high tempo is further supported by Multi-Ping Multi-Look processing, which improves the signal-to-noise ratio at long ranges, ensuring the data remains "decision-grade" even at maximum speed.

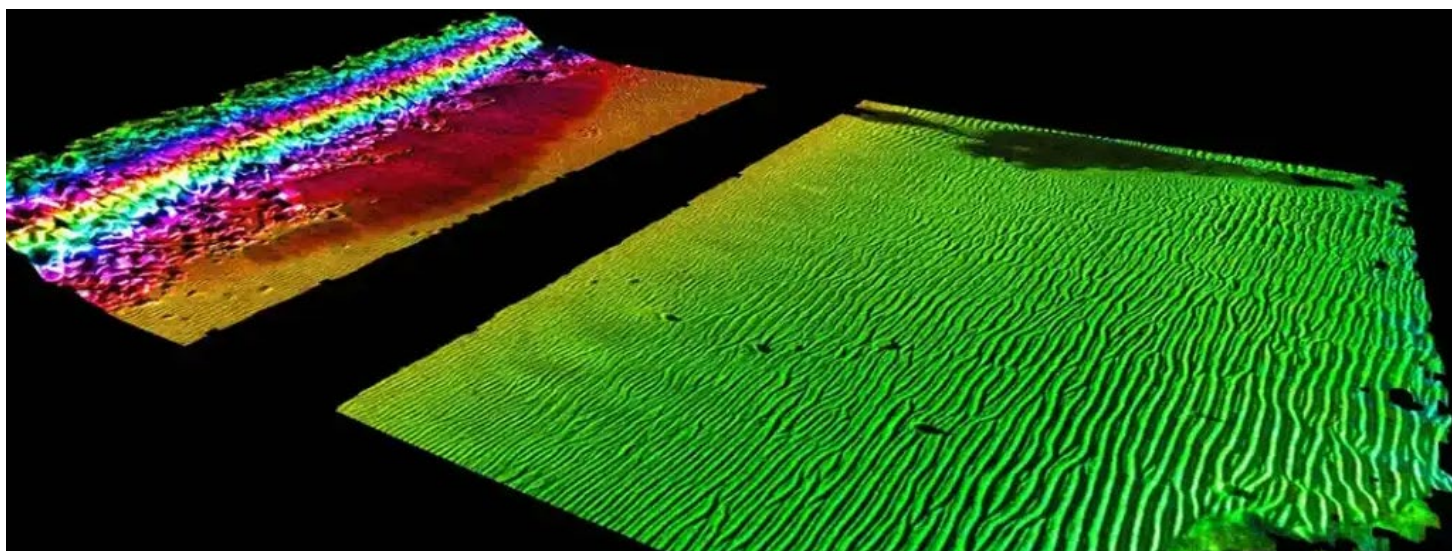
Solstice presents its data as a high-resolution, "pixel-perfect" side-scan image that is perfectly overlaid with a 3D bathymetric map of the seafloor. This co-registered view allows operators to simultaneously see the visual details of an object and its physical height and depth in a single, unified display.

Designed for ease of integration, Solstice is available as either a standalone payload pressure vessel or as modular OEM electronics. Developers can leverage an Application Programming Interface (API) to interface with their specific vehicle architecture. The system is also offered as a Forcys UUV integrated payload.

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Specifications – Solstice 3000	
Swath	200 m (100 m range)
Along track beamwidth	0.15°
Operational speed	2 to 6 knots
Frequency band	725-775 kHz
Source Level (dB re 1 µPa @ 1 m)	220 dB
Number of Receiver Channels	2 x (32 +4)
Number of Transmitter Channels	2 x 32
Physical Specifications – Solstice	
Dimensions	682 mm x 270 mm dia.
Weight	300 m and 600m depth rated – 4.22 kg WIA – PPV 2.88 kg WIA 1,500 m depth rated – 13.8 kg WIA – PPV 7 kg WIA
Power Operational/Max Peak	18W (26 W including onboard RT)



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