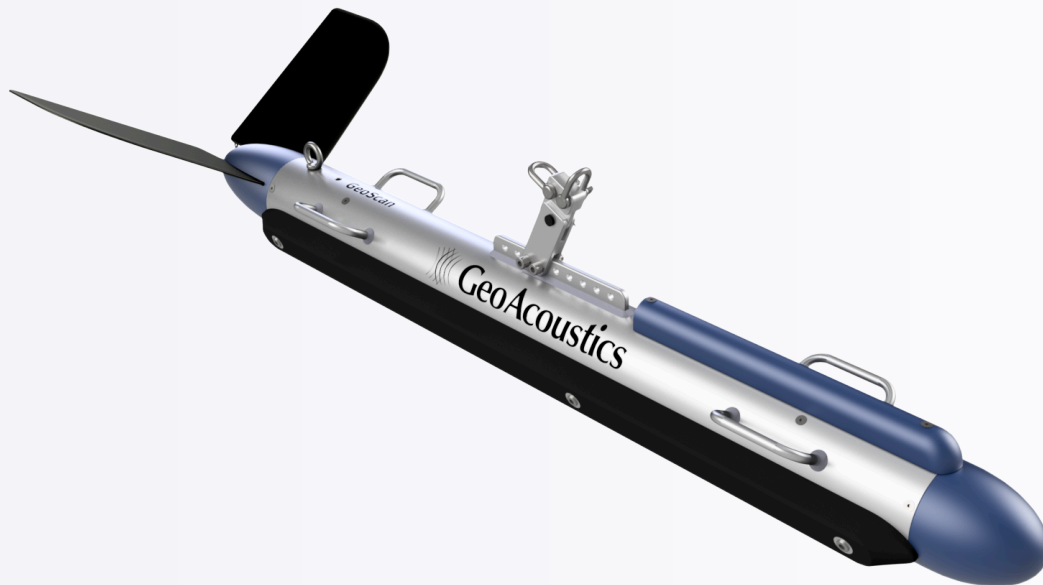# GeoScan 2491

Simultaneous Dual Frequency Side Scan Sonar

OVERVIEW

The GeoScan 2491 is a simultaneous dual-band, high-definition Side Scan Sonar designed for a diverse range of survey applications. Operating at 400 kHz and 900 kHz with a 60 kHz bandwidth, the GeoScan 2491 is designed for end-users that need the best image resolution.

The GeoScan 2491 uses ultra-short pulses and pulse compression technology for improved range resolution across track and image resolution. A dynamic variable aperture focusing system improves resolution at shorter ranges and quality at longer ranges, and an automated image equalisation system enhances contrast and definition.

The GeoScan 2491 contains an embedded pitch, roll & heading sensor, and a pressure sensor for depth measurement. Ideal for underwater infrastructure inspections, pipeline surveys, emergency response, archaeology, marine pasture assessments, and environmental monitoring, it delivers precise, high-resolution data in demanding conditions.

KEY FEATURES

- Dual frequency operation: 400 kHz & 900 kHz for increased resolution
- 60 kHz update time
- CW and Chirp pulses
- No near-field blurring
- Superior terrain visualisation

APPLICATIONS

- Search & Recovery (SAR)
- Hydrographic surveys
- Object detection/identification
- Inspection & Engineering
- Marine Geology & Archaeology

GeoScan 2491 Technical Specifications

Performance

Working Frequency	400 kHz / 900 kHz
Signal Bandwidth	60 kHz
Max Slant Range	150m @400kHz / 75m @900kHz
Horizontal Beam Width	0.21° @400kHz / 0.2°@900kHz
Vertical Beam Width	50°
Across Track Resolution	1.25cm @400kHz / 1 cm @900kHz
Along Track Resolution	400kHz: 0.18m @5Om; 0.27m @75m; 0.37m @100m 900kHz: 0.07m @20m· 0.17m @5Om· 0.26m @75m
Signal Type	CW/Chirp
Working Depth	300 m
Auxiliary Sensors	Pressure, roll, pitch & heading

Physical

Towfish Size	100 x 1200 mm
Towfish Weight	25 kg (In Air) / 12 kg (In water)
Sonar Interface Module Size	208 x 127 x 66 mm
Sonar Interface Module Weight	1.6 kg
Power Supply	DC 20-36V
Power Consumption	60 W
Cable Length	Standard 50 m (200 m Optional)
Data Interface	Ethernet Cable
Working Temperature	-2°C ~ 40°C
Storage Temperature	20°C ~ 55°C

Software

Display & Control Software	Supplied with GeoScan software for control and storage of sonar data
Third Party Compatibility	Export XTF format data to 3rd party applications

Specifications subject to change without notice. E&OE