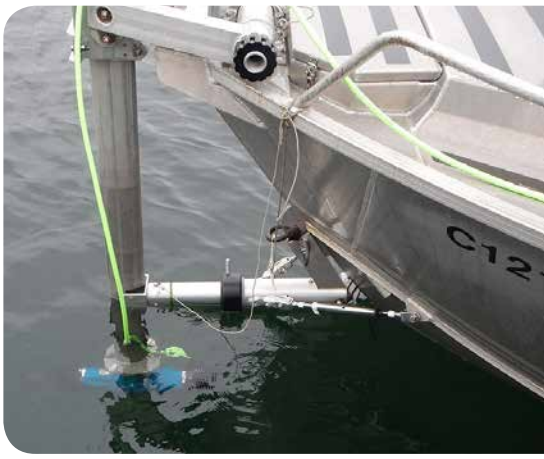
geometius

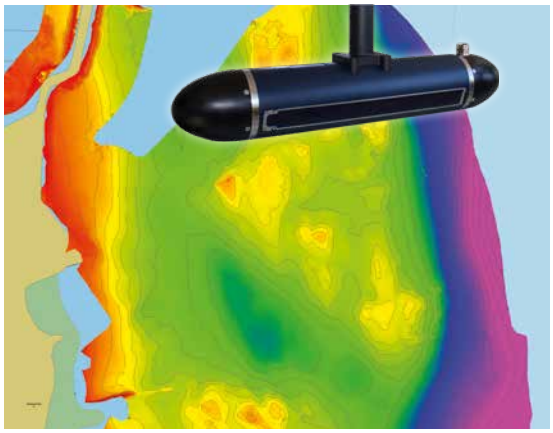
where bathymetry meets 3D imagery

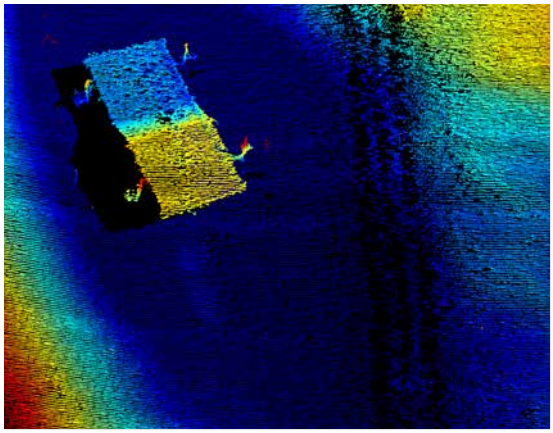
3D side scan sonar

Ping DSP, 3DSS-DX-450



- 3D underwater imaging and mapping
- Unique signal processing method “CAATI”
- Spans the entire watercolumn from seabed to surface
- Superior wide swath bathymetry
- Compact, low power and easy-to-use





Wide Swath Bathymetry
High resolution swath bathymetry coverage of up to 14 times water depth. State-of-the-art acoustic transducer technology, based upon the unique and patented CAATI signal processing, provide superior swath bathymetry performance by separating backscatter arrivals from the seabed, sea-surface, water-column and multipath.

Real Time 3D Sidescan Imagery
3D Sidescan imagery spans the entire water column and extends 2D sidescan resolution capabilities to three dimensions. Revolutionary Sidescan3D™ software displays stunning 3D imagery in real time. The 3DSS-DX-450 target logger feature allows easy capture and inspection of 3D objects and seabed views to augment bathymetry with colocated, geometrically correct views of structures, pipes, cables, pilings, debris, hazards, habitats, vegetation and other finescale features of the seabed.

Ping
Digital Signal Processing

geometius.nl/pingdsp

Patented array signal processing technology (CAATI)

The 3DSS-DX-450 incorporates a patented signal processing methodology that extends the single angle-of-arrival principle used in interferometric systems to accomodate multiple simultaneous backscatter arrivals (e.g. the seabed, sea surface,water-column, and multipath). The result is true 3D sidescan imaging and superior swath bathymetry from a compact, easy-to-use sonar.

SONAR SPECIFICATIONS

Operating Frequency	450 kHz
Horizontal Beamwidth (2 way)	0.4°
Vertical Beamwidth (selectable)	15° - 125°
Mech. Transducer Tilt (fixed)	20°
Electronic Transmit Tilt	-45° to 45°
Max. Ping Rep. Rate	~30 Hz

SPECIFICATION 2D AND 3D IMAGERY

	2D	3D
Data Output	Range and Amplitude	Range, Angle, and Amplitude
Max Range	200 m per side	100 m per side
Max Resolution	1.67 cm	1.67 cm

Typical 2D Imaging Swath Width	10 to 20 times sonar altitude depending on sound profile and bottom type
Typical 3D Bathymetry Swath Width	6 to 14 times sonar altitude, varies with sound velocity profile and bottom type

BATHYMETRY SPECIFICATIONS

Typical Bathymetry Swath Width	6 to 14 times sonar altitude, varies with sound velocity profile and bottom type
Max Bathymetry Range per Side	100 m per side

INTEGRATED MRU SPECIFICATIONS

Roll & Pitch	0,5°

INTERFACE SPECIFICATIONS

External input:	1 PPS, RS-232 interface, NMEA and TSS protocols
Computer Requirements:	PC (Quad Core, 8GB, Discrete GPU (e.g. Nvidia), MS Windows 7 or 8 (64 bit)
3rd Party Software Support:	QINSy, PDS2000, Hypack, SonarWiz

PHYSICAL SPECIFICATIONS

Voltage Requirements	24 VDC +/- 10%
Power Consumption	17 W idle, 22W typical (current: 0.7A idle 0.9A typical average, 3A max for 2sec., 7A peak)
Dimensions	56,8 cm (length), 9,8 cm (diameter)
Weight	8 kg (in air)
Depth Rating	10 m

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