

DF-1000

DIGITAL SIDE SCAN SONAR SYSTEM



EdgeTech DF-1000 Towfish

The *EdgeTech DF-1000 Digital Side Scan Sonar System* integrates the advanced digital image processing capabilities of the 560D Topside Processor with the unparalleled digital side scan sonar data acquisition of EdgeTech's DF-1000 Series Digital Side Scan Sonar Towfish.

The lightweight, portable, and rugged DF-1000 Series System features simultaneous 4-channel, dual frequency side scan sonar data acquisition and display. The easy-to use 560D also allows the user to store data digitally for later playback or archival purposes. Post processing data enhancement capabilities include image correction and optional mosaic generation. The system also allows for target capture, view, zoom, measure, store, and compare capabilities.

The 560D Processor also features numerous key towfish sensor displays and controls, including dual simultaneous 100/500kHz operation, heading sensor, depth (optional), pitch and roll (optional), and temperature (optional).

Engineered to deliver optimum seafloor detail over long cable lengths.



EdgeTech 560D Topside Processor

Features:

- Simultaneous 4 channels side scan display
- NMEA 0183 navigation input
- Image correction
- Mosaic generation (optional)
- Target, capture, zoom, view, measure, store, and compare
- Selectable color palettes
- 25 to 1000 meter range
- Graphic printer drivers

Applications:

- Hydrographic surveys
- Channel conditioning and clearance surveys
- Geological surveys
- Cable and pipeline surveys
- Search and recovery
- Site selection surveys, pre/post dredging surveys
- Location of potential seafloor hazards
- Mine countermeasures

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Key Specifications

DF-1000 Towfish

Frequency	Standard resolution: 100 ± 10 kHz, high resolution 400 ± 20 kHz
Pulse Length	100 kHz- 0.1 msec, 500 kHz- 0.01 msec
Peak Output	100 kHz- 228 dB re one μ Pascal at 1 meter, 500 kHz - 222 dB re one μ Pascal at 1 meter
Horizontal Beam Width	100 kHz - 1.2°, 500 kHz - 0.5°
Vertical Beam Width	50° tilted down 20°
TVG Range	100 kHz - 60 dB to 300 msec, 500 kHz - 43 dB to 120 msec
A/D Resolution	12 bits/sample
High Speed Digital Up-link	1.5 Mbits/sec, 4 channels of side scan data, Digital & analog user channels (optional)
Sampling Rate	24 kHz/channel
Heading	Built-in flux gate compass to 0.5° accuracy
User Ports	(1) Serial - RS-232C, 9600 Baud, (1) Parallel - 8 bit Centronics, (1) Analog - 0 to 5 volts
Optional Attachments	Pressure, Temp, Sub-Bottom Profiler, Acoustic Responder, Pitch & Roll, and Custom Sensors
Operating Voltage	40 to 60 VDC
Operating Depth	1000 meters (3300ft.)
Tow Speed	12.7 knots maximum (for fully corrected data)
Operating/Storage Temperature	0°C to 45°C (32°F to 113°F) / -30°C to 60°C (-22°F to 140°F)
Size	11.4 cm dia. x 158 cm length (4.5 in. dia. x 5.2 ft.)
Weight	30 kg (67 lbs)

560D Processor

Channels	2-100kHz Port/Starboard and/or 2-500 kHz Port/Starboard
Main Processor	Pentium III
Memory	128 Mbytes minimum
Hard Drive	30 Gbytes minimum
Floppy Drive	1.44M 3.5"
Data Storage	DVD-RW Drive
Keyboard	101-key
Pointing Device	3 button industrial trackball
Video Display	SVGA CRT, size: 17", colors: 256 million, resolution: 1280 x
Sync Output	5 VDC pos/neg selectable; 90 μ sec (from DCI)
Responder Trigger	5 VDC pos/neg selectable; 26 μ sec (from DCI)
Navigation Port	NMEA0183, RS232
Annotation	Via keyboard and RS232
Event Mark	Via keyboard RS232
Parallel	Centronics compatible printer
Weight	CPU: 18 kg (40 lbs.), monitor: 19 kg (42 lbs)
Temperature	Operating: 5°C to 40°C, non-operating: -40°C to 45°C
Humidity	Operating: 20 to 80%, non-operating: 5 to 95%

Specifications subject to change without notice.

Other EdgeTech Products

✓ Side Scan, Sub-bottom, Integrated and Modular Imaging Systems for Deep Towed, AUV, ROV and Other Applications utilizing Full Spectrum, MultiPing or Synthetic Aperture Acquisition and Processing Techniques.



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