SEAMAP
A MIND Technology Business

SEAMAP SEALINK™ 24 DIGITAL MODULE

24 CHANNEL DATA ACQUISITION

Seamap's SeaLink 24 Digital Module is designed to complement the SeaLink 3840 Recording Systems.

The digitizing modules are powered via a 750 mA DC constant current loop. The 24 channel analog input is capable of sampling at ¼, ½, 1, 2 and 4ms via 24bit delta sigma converters. Digitized data including data from other modules in the array are transmitted to the recording system via Seamap's proven proprietary telemetry system over common electrical twisted pairs. The power, control, data acquisition and systems diagnostics of the modules are performed via the SeaLink workstation on the recording vessel / platform.

The SeaLink 24 Digital Module is enclosed in a 2.375" (60.325mm) OD titanium tube with end-caps. The SeaLink module has a crush depth of 6,925m. The Seamap custom SeaLink 56 pin connector has proven reliable and durable in the harshest environment. All SeaLink Modules have double O-Rings and are Nitrogen filled to ensure mechanical integrity.

The SeaLink 24bit Data Acquisition System is based on proven technology and can be configured for many applications including marine seismic data collection.

Custom designs and customizing SeaLink Modules are available upon request. All exposed in-sea metals are titanium.

Key Features:

- 24 Channels in one Module
- Selectable Gain
- Selectable Low Cut and High Cut Filters
- Lower Power Consumption
- High Channel Capacity – 480 Channel @ ¼ ms per Array
- Continuous Data Collection
- Sample Rates of ¼, ½, 1, 2 & 4 ms
- Reduced Component Count

Applications:

- Marine 2D / 3D / 4D Seismic
- High Resolution Seismic
- Ultra High Resolution Seismic
- HR3D Ultra High Resolution Seismic
- Ocean Bottom Cable (OBC)
- Vertical Arrays
- Reservoir Monitoring
- Passive Acoustic Seismic
- Passive Acoustic Monitoring

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Specifications:

SeaLink 24 Digital Module		
Number of Seismic Channels	24 Per Module 4 Data Lines (Programmable Per-Application Requirement)	<table><tr><th>Rate</th><th>Int.</th><th>#Chan</th><th>#Mod</th></tr><tr><td>4000</td><td>0.25</td><td>480</td><td>20</td></tr><tr><td>2000</td><td>0.50</td><td>1,008</td><td>42</td></tr><tr><td>1000</td><td>1.00</td><td>2,016</td><td>84</td></tr><tr><td>500</td><td>2.00</td><td>4,128</td><td>172</td></tr><tr><td>333</td><td>3.00</td><td>Custom</td><td></td></tr><tr><td>250</td><td>4.00</td><td>Custom</td><td></td></tr></table>
Non-Seismic Channels Allocated	NAD Channels	Internal Pressure Internal Temperature Voltage Measurements Current Measurements
Analog/Digital Converter	24bit Delta Sigma Type	
Dynamic Range	> 112 dB (5-206 Hz)	Based on 2ms Sample Rate
Distortion	THD < 0.003%	Based on 2ms Sample Rate
Lower Power Consumption	Less than 3.3 watts per module (86 mwatts per-channel)	
Preamplifier Type	Voltage Mode Differential Input	Selectable Gain +1.0% accuracy: 0 to 36 dB Increments in 6dB steps
Low Cut Filter	Analog	5Hz 6db/Oct (Hydrophone Cap + Input Z)
Low Cut Filter	Digital Infinite Impulse (IIR) Filter	Selectable Settings: .1 to 10Hz in 1 Hz Increments 6db/Oct
High Cut Filter	Digital Linear Phase	
Selectable Sample Rates	0.25 mS 0.5 mS 1.0 mS 2.0 mS 4.0 mS	-3 dB Corner Frequency: 1652Hz -3 dB Corner Frequency: 824Hz -3 dB Corner Frequency: 412Hz -3 dB Corner Frequency: 206Hz Custom
Functional Testing	Source: Internal Test Oscillator, Frequency: 31.25 Hz, Sine Wave	
Tests	DC Offset, RMS Noise, Channel Gain Accuracy, Impulse Response Hydrophone Leakage, Harmonic Distortion, Crosstalk	
SeaLink 24 Digital Module Physical Dimensions	Length: 14.43” (366.52 mm) Overall: 19.59” (497.58 mm) OD: 2.375” (60.325 mm)	Weight in air: 6.18 lbs (2.803 Kg) Weight in water: 3.15 lbs (1.428 Kg)

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