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HydraSeis Multi-Channel Seismic Streamer

Key features

- Modular ultra-high resolution streamer
- Wide band 16kHz sampling for UHR data
- 12 and 24 channel active sections
- 4 streamer sections (96 channels 2D)
- 2 additional AUX channels

- In water 24 bit ADC
- Continuous sequential recording
- 2D and 3D survey configuration
- Integrated GPS and positioning options
- Light weight, low noise, balanced construction

HydraSeis Overview

The HydraSeis UHR system has been developed to acquire digital multichannel Ultra High Resolution (UHR) seismic data. The design methodology of the HydraSeis system compliments Applied Acoustic's existing range of ultra-high resolution sound sources to provide a step change in performance and data quality.

The in water internal 16kHz 24-Bit ADC modules provide digital low noise, wide bandwidth data acquisition. The 100Mbps network data link to the system console provides continuous ultra-high-resolution recording coupled with external navigation integration.

The flexible modular system allows for 2D and 3D UHR data acquisition, at fast shot intervals for a wide range of marine geophysical survey applications.

Technical Specification

PHYSICAL

Diameter	Ø 45 mm (nominal)
Stress Member	Dyneema x4, 750 kg MBL (per member)
Jacket Material	Polyurethane
Fill Material	PMX-561
Depth Rating	30 m

ADC MODULES

Channels	24 / 12 channels per section (2 ADC modules per section, 12 channels per module)
Sample Frequency	16 kHz / 8 kHz
Sample Interval	0.0625 ms / 0.125 ms
Anti-Aliasing Filter	Set by sample interval
Resolution	24 Bit ADC
ADC amp	36 dB, configurable
Module Communication	100 Mbps Ethernet

ACTIVE CONFIGURATION

HYD-24CH 2 Ele 1m	HYD-24CH 2 Ele 1m/Bird	HYD-24CH 1 Ele 1m	HYD-24CH 1 Ele 1m/Bird
HYD-12CH 2 Ele 2m	HYD-12CH 2 Ele 2m/Bird	HYD-12CH 1 Ele 2m	HYD-24CH 1 Ele 2m/Bird

Hydrophones Per Group	2 or 1 (other groupings available on request)
Group Length	150 mm
Group Interval	1 m, 2 m
Active Length	24 m
Bird Coil	1 per section (optional /Bird)

HYDROPHONE

Max Number of Channels	96 (16 kHz) / 192 (8 kHz)
Channel Sensitivity	-197 dB ref 1v per µPa
Frequency range	up to 10 kHz (±3dB)

ELECTRICAL

Main Power	115/230 V AC (supply to console)
Streamer Power	48 V DC (via console)

TOW CABLE – HYD-TL50

Stress Member	Aramid fiber braid, 700 kg MBL
Jacket	Polyurethane
Conductors	Power, Network, Auxiliary, Spare
Tow Cable Length	50 m Standard

Console and Software

HYD-DATA PC

PC based application running on a dedicated Windows 11, 64 bit machine/network.

- SEG-D Recording with navigation data recorded to header
- Logging to internal HD with optional automated external storage back-up
- QC windows for: Live shots, Trace gathers, Navigation, Error reports, Data storage monitoring

HYD-CONSOLE

- 2 AUX channels for analogue data/Near field hydrophone
- Earth leakage sensor
- Key in and Digi-bird interface
- Local power control / indicators

Components

HYD-DL50	HydraSeis 50 m Deck Cable
HYD-SWIVEL	HydraSeis Tail Swivel Termination.
HYD-2D Deck Interface	HydraSeis Break 2D Deck Interface Box.
HYD-3D Deck Interface	HydraSeis Break 3D Deck Interface Box.

Options

HYD-TL50/100	HydraSeis 50/100 m Tow Leader Extension Cable
HYD-TLRM	HydraSeis Tow Leader Repeater Module. (HYD-TLRM+HYD-TLE50+HYD-TL100= 150 m Tow Leader)
HYD-BKM	HydraSeis Break Out Module: Mini Pod Interface and Depth sensor.
HYD-BKM AHRS	HydraSeis Break Out Module: Mini Pod Interface, Depth sensor and AHRS
SBP- Tow Buoy	Light Weight Towing Buoys, with Mini Pod and Battery Pack Mounts
HYD-SS10 /Bird	HydraSeis 10 m Stretch Isolation Section (optional /Bird Coil).
HVR-0120	Hand Storage Reel

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